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THE COVER PHOTO

is of the winning American-bred collection at the ADS convention show in Portland, Oregon. Shown by Robert Spotts, California, the collection included (top, L to R) Lapwing, Pink Angel, Oryx, and (bottom, L to R) Jingle Bells and Waxwing. (Gripshover photo)

1984 SHOW REPORTS

MRS. HERMAN L. MCKENZIE, Jackson, Mississippi

"Better late than on time" might be the best thumbnail description of the 1984 daffodil show season. Or, if you prefer, "Have daffodils---finally! Will travel."

Mary Rutledge's comment about the Chillicothe, Ohio, show picks up the three keynote elements of the season: "The pinks had strong color, and in spite of the weird weather, we had a beautiful show due to entries from Indiana and West Virginia."

Color—deep, brilliant, vivid, long-lasting color. Cool weather, lingering well into late spring. Long-distance commuting to find a show that was in sync with your daffodils.

In Nashville, the brilliance of the red-cups and the vividness of the pinks were headline news. "Cool. dark days in March," explained Margaret Cosner, "brought lovely colors this year." In the Louisville report, Mrs. Wynant Dean stressed the "wonderful texture, color, and substance." From the Tidewater show in Hampton, H. deShields Henley explained, "The colors, size, substance and stems were outstanding, due to cool weather and much rain."

Cold and late indeed it was, this year of 1984. Nancy Gill in Columbus called it, "The latest spring in history;" but she was amazed, as was Mary Craig in Chambersburg, Mrs. Verne Trueblood in Scottsburg, and Cathy Riley in

Greenwich, with the uniformly high quality of the exhibits.

You might not have had blooms open for your home show in Clinton or Columbus or Washington; but by Memphis or Cleveland or Chambersburg, you probably had caught up with the season. "Tag" Bourne in Cloumbus said that she had plenty of time to prepare the judges' luncheon, as she had only six daffodils to enter. "In order to show, we had to travel such a distance. Finally, by Cleveland, I had quite a few blooms to enter." As Cathy Riley exclaimed, reporting on the Greenwich show (where the Chambersburg folks went to catch up with the season), "The amazement was that all but two of the three-stemmed classes had entries. We had so many more out-of-town exhibitors than usual."

Even bad weather brings some good things. Donald Sauvain, in Bloomington, Indiana, points out, "It was really special to see the many beautiful Division 6s still at their peak so late in April. All the divisions opened at once, it seemed, in our very

late gardens."

By the time the last flower had been carefully staged in Dublin, New Hampshire, and Minneapolis, Minnesota, it had been a very good daffodil season indeed, with several records broken.

We had forty ADS-sanctioned shows in 1984, up from 37 last year. The number of blooms, 27,502, far exceeded the 1983 total of 25,474; and the number of

exhibits was slightly higher, 13,518 to last season's 13,444.

In this springtime when the weather made travelers of us all, quite a few shows had a large, participating attendance. A friend from the Middle Atlantic Region, explaining why she wouldn't see me in Portland, said "I've been out to Oregon twice, and besides, somebody's got to go to Gloucester." Well, somebody did, a whole lot of somebodies, with a great many gorgeous daffodils. The Gloucester show topped the ADS with 1,640 blooms in only 612 exhibits.

Other ADS shows with more than 1,000 daffodil blooms exhibited were Hampton with 1,253 at the Tidewater show; Hernando with 1,232; Bloomington, 1,144; Chambersburg, with 1,087; and Chapel Hill, which had the most separate

exhibits, 618, with 1,051 daffodils.

THE QUINN MEDAL

The Quinn Medal, which is named for Carey E. Quinn, one of the founders of the American Daffodil Society, is awarded to a collection of twenty-four cultivars from no less than five divisions, with each stem scoring 90.

The Gold Quinn, awarded only at National Shows, went to Father Athanasius in Portland with a carefully-chosen and superbly staged collection which included New Penny, Dividend, Fintona, Cherry Bounce, Big John, Dailmanach, Pitchroy,

Coloratura, Purbeck, Lapine, and Galahad.

Silver Quinn medals were awarded in six of the forty ADS shows across the United States in 1984. Mr. and Mrs. Jack Yarbrough, in Atlanta, won with a collection which included a dozen Division 2 daffodils: Key Largo, Patrician, Space Age, Gold Coin, Gold Crown, Paradox, Opalescent, Chapeau, Nazareth, Resplendent, Charter, and Falstaff.

Two Quinn winners the same weekend, Elizabeth Entrikin's in Hernando and the collection staged by Mr. and Mrs. Herman L. McKenzie in Memphis, focused upon the smaller flowers. Mrs. Entrikin had ten from Division 3, 6, and 7, set off brilliantly by Aranjuez, Loch Owskeich, Resplendent, and Red Hawk. The small-flowered, graceful McKenzie group included Longspur, Waif, Oryx, Bunting,

Stratosphere, Curlew, Circuit, Step Forward, Limey Circle, Polar Ice, and Gossamer.

Donald Sauvain, at the Chillicothe show, won a Quinn with a dozen from Division 2, such as First Frost, Churchman, Sacajawea, Carnlough, Early Mist,

and Yellow Moon, plus 6s such as Tracey, Delegate, and Tinker Bell.

Two elegant late-midseason Quinn winners were those of Joseph Stettinius in Baltimore and Mrs. Johannes R. Krahmer at Chambersburg. Stettinius used Champagne Magnum, Starmount, Cairngorm, Gull, Spring Fashion, Rainbow, and Yamhill as foil to four brilliant Division 3 s: Achduart, Centreville, Irvington, and Moon Rhythm. Mrs. Krahmer selected Grand Prospect, Firestorm, Derg Valley, Madrid, Silver Convention, Water Music, Yellowtail, Faro, and Hilford.

The Quinn Ribbon is presented to successful exhibitors who have previously won a Quinn Medal. Mr. and Mrs. Richard Frank won a Quinn Ribbon in Louisville with thirteen from Division 2: Arctic Char, Shining Light, Rameses, Seafoam, Tullycore, Barbados, Lara, Topkapi, and Avenger. At the very end of the season, Mrs. John T. Haskell, in Dublin, used exquisite smaller flowers in her Quinn Ribbon winner, including Shuttlecock, Seraph, Jingle Bells, Petrel, Akepa, Golden Wings, Angel Eyes, and Poet's Way.

Mrs. Marvin V. Andersen, in a space of ten days, won Quinn Ribbons in four ADS shows, beginning with Columbus, and continuing through Wilmington, Short Hills, and Greenwich. Of the ninety-six daffodil cultivars, fifty-six were used only once. She selected Fiji, 4 Y-Y; Glenfarclas, 1 Y-O; Creag Dubh, 2 O-R; Lemon Candy, 2 Y-WWY; Safari, 2 Y-O; and Sputnik, 6 W-YYP, for three of the four Quinn Ribbon winners. Eleven other cultivars were used twice: Golden Amber, Golden Vale, Arctic Gold, Rameses, Emphasis, Amber Castle, Declare, Heart's Desire, Raspberry Ring, Fragrant Rose, and Mexico City. This impressive achievement bears witness to great skill both in growing and in exhibiting daffodils.

THE WATROUS MEDAL

The Watrous Medal, named for Roberta Watrous of Washington, D.C., a pioneer in miniature hybridizing throughout the years of the ADS, is given to a blue-ribbon collection of twelve miniature daffodils from at least three divisions.

The Watrous Medal was won in four shows this season; the Watrous Ribbon, given to exhibitors who have previously won the medal, was presented in six shows.

Bonnie Bowers, in Ross, used eight species in her dozen including three different N. bulbocodium varieties, and Tete-a-Tete, Sundial, Minnow, and Pixie's Sister. Judy Faggard, in Hernando, also relied upon such species as juncifolius, triandrus albus, j. henriquesii, b. tenufolius, Canaliculatus, scaberulus, and triandrus concolor.

Kevin McKenzie's winning Watrous collection in Memphis included Heidi, Chit Chat, Pixie's Sister, Hawera, Jumblie, and Baby Moon. Mrs. George Parsons won in Gloucester with a grouping that included Pango, Picoblanco, Snipe, asturiensis, and a "N. scaberulus that really knocked them over," according to Mrs. William McKelvy, the Gloucester show chairman.

The roster of Watrous Ribbon winners included Nancy Wilson in Fortuna, David Cook in Atlanta, Mary Lou Gripshover in Nashville, Mrs. Goethe Link in Scottsburg, and Mrs. James Liggett in both Cincinnati and in Columbus.

Mrs. Wilson staged seven species plus April Tears, Sundial, Minnow, and Yellow Xit. Mr. Cook's collection focused upon Halingy, Small Talk, Rupert, Snipe, and the species *N. watieri* and the season's tiny "dark horse," the Broadleigh seedling *N. atlanticus* × *rupicola pedunculatus*. Mrs. Gripshover also used the seedling and added two of her own miniature hybrids and Tosca, Zip, and Flyaway.

5

Mrs. Link, in Scottsburg, staged her #79-B (Mite × cyclamineus), a 6 Y-Y, as well as Pledge, Tanagra, Gipsy Queen, and Candlepower.

Mrs. Liggett used Heidi, Mite, Tete-a-Tete, Snipe, Bagatelle, and Little Gem in both of her Watrous winners, adding Little Beauty, Hummingbird, Rockery White, Zip, Lilliput, and N.b. conspicuus in Cincinnati; and Jumblie, Quince, N. juncifolius, N. scaberulus, N. rupicola, and Yellow Xit in Columbus.

THE BRONZE RIBBON

The Bronze Ribbon, awarded only at regional shows and presented to a blueribbon collection of twelve cultivars, three stems each, may well be the most overlooked, underestimated, and most difficult of all the ADS awards to win.

First you have to find the regional show. This year that wasn't quite as hard as in some seasons. For the first time in many years, according to Awards Chairman "Tag" Bourne, a regional show was held in each of the nine regions. Yet once again, there were only three winners across the nation; David Cook at the Southeastern show in Atlanta, Mrs. Harold Stanford at the Southern show in Nashville, and Mrs. Marvin Andersen at the Northeast show in Wilmington.

The Bronze Ribbon depends both on timing and on having what Libby Frey terms "a really good stock of the daffodils I like best." There's a bit of a home-court advantage, too; the three winners this year, as well as in 1983, won the Bronze Ribbon in their home town shows, although they all won many other ADS awards in other shows.

David Cook's Bronze winner in Atlanta included new and impressive daffodils such as Golden Chord, Scoreline, and Rival, teamed with very dependable and lovely older cultivars like Daydream, Wedding Gift, Charter, and Coral Ribbon.

Sally Stanford's Bronze collection relied heavily upon impressive British Isles favorites such as Golden Aura, Broomhill, Queenscourt, Amber Castle, and Ben Hee, with just a touch of Oregon in Resplendent, Suede, and Chapeau.

Kathy Andersen's late-season Bronze Ribbon collection relied heavily on new and British, plus older and Irish: Lea's Glenfarclas and Loch Lundie; Board's Strines and Glenside; Bloomer's Silent Valley; Dunlop's Woodvale; Wilson's Drumboe; and Richardson's Tonga, Rockall, and Olympic Gold.



Sally Stanford's Bronze Ribbon Collection in Nashville

THE THROCKMORTON RIBBON

In the three brief years of its existence, the newest ADS award has become popular with exhibitors, with show-goers, and even with the judges. Laura French, chairman at Princess Anne, noted, "The Throckmorton Ribbon, offered for the first time in this show, had such outstanding quality that other judges helped the panel make the selection."

This show season, my husband and I entered both the Quinn and the Throckmorton for the first time, so I had a vantage point for comparison.

The Quinn is caution and consistency. The Throckmorton is risk and adventure. The Quinn is calligraphy upon parchment with a quill dipped in ink; the Throckmorton is a new yellow legal pad and a bright purple Flair pen. The Quinn is

agonizing, nail-biting worry; the Throckmorton is fun.

Our garden falls into both of the categories for which the Throckmorton offers such potential. We're division specialists, growing every 7 in commerce, and some that aren't; and half a Throckmorton entry could be jonquils. I also agree with Brent Heath that a separate intermediate section is a great idea whose time just hasn't quite arrived; and a Throckmorton can win without a single large flower.

In 1984, sixteen happy exhibitors went home with a ribbon of a unique color

appropriate for honoring the creator of uniquely toned daffodils.

Robert Spotts, at Ross and LaCanada, and Mrs. W.R. Mackinney, in Chambersburg and in Baltimore, won the Throckmorton Ribbon twice. Both of Bob's entries and one of Joy's featured bright red cups; the Mackinney winner in Chambersburg was a medley of very new Irish and English large daffodils. Also utilizing bright reds and pinks were Joseph Stettinius in Chapel Hill; and Ted Snazelle in Hernando, who had the largest number of divisions—seven—in any Throckmorton entry.

Handy Hatfield's winner at Mansfield, with Indian Maid, Craigdun, Kimmeridge, Crenelet, Amber Castle, and Cairn Toul; and Father Athanasius's winner at Portland, including Pay Day, Jewel Song, Barbie Doll, Wizard, Altruist, and State

Fair, were particularly impressive.

Predominantly small-flowered entries won for Mrs. David Frey in Bloomington, the H.L. McKenzies in Memphis, and Mrs. N.T. Whittington, Jr., at Princess Anne. A judicious mixture of old and new, large and small, was the key to victory for Christine Kemp in Fortuna, Jaydee Ager in Atlanta, Mrs. R.C. Butler in Conway, Donald Sauvain in Columbus, and Julius Wadekamper in Minneapolis.

THE GOLD AND THE WHITE RIBBONS

Ten daffodil cultivars won the top single and three-stem honors in two shows across the nation in the 1984 season, including, appropriately enough for a springtime when we met in Portland, five Grant Mitsch introductions,

Loch Lundie, John Leà's 2 Y-R, won the Gold both in Hernando and at Greenwich, the early and late of it, the south and the north. It received accolades the country over for its performance in many entries. Greenwich show chairman Cathleen Riley exulted, "Loch Lundie was superb—I took it to my office where it shone for five more days. What a keeper!"

John Blanchard's Purbeck won Gold both at Portland and in Louisville, while Tom Bloomer's elegant Golden Joy took the Gold at Gloucester and in Chillicothe. Jenny, often the neglected sister from the famous old Coleman threesome, won the Gold in Princess Anne and the White in Edgewater, while Richardson's Court Martial won Whites in Rome and Washington, D.C.

Mitsch cultivars winning multiple honors included Resplendent, Gold in Ross, White in Clinton; Festivity, White in Oxford and in Princess Anne; Aurum, White





Loch Lundie

Bender 75/57



Sally Stanford's Purple Ribbon collection in Portland included Limpkin, Resplendent, Ben Hee, Euphony, and Pure Joy.

both in Louisville and in Scottsburg; Daydream, Gold in Oxford and White in Mansfield; and Gull, Gold both in Washington and in Mansfield.

Eight exhibitors won in more than one ADS show. Handy Hatfield took the White in three shows, Chillicothe, Columbus, and Mansfield, and added a Gold in the first. Kathy Andersen won a pair of Golds, in Columbus and in Chambersburg, and added a White in Wilmington.

Mrs. Verne Trueblood won the White in Louisville, and both awards in Bloomington; Mrs. John T. Haskell won the White in Greenwich and both top honors in Dublin. Mrs. Harold Stanford won Gold in Louisville, White in Nashville; Jay Pengra won the White and Gerard Wayne the Gold in Corona del Mar; they reversed the order at LaCanada.

Winners are listed with the name and place of the show, the sponsoring organization, the number of blooms entered, and the day on which the show opened. (G=Gold, W=White)

SHOW Southern California Daffodil Society, Corona del Mar;	CULTIVAR Ice Age 2 W-W G Mitsch C 59/5 W (Vulcan × N. cyclamineu	EXHIBITOR Gerard Wayne Jay Pengra s)			
446; 3/2	· · · · · · · · · · · · · · · · · · ·				
Central Mississippi Daffodil Society, Clinton; 455; 3/10	Jetfire 6 Y-R G Resplendent 2 Y-R W	Blaine Snazelle Dr. Ted Snazelle			
Northern California Daffodil Society, Ross; 629; 3/10	Resplendent 2 Y-R G Bon Accord 2 W-Y W	Sid DuBose Bonnie Bowers			
Texas Daffodil Society, Dallas; 582; 3/15	Cassata 11 W-W G Texas 4 Y-O W	Mrs. Kelly Shryoc Mrs. Wanda Dow			
Southern California, and Pacific Regional; LaCanada; 729; 3/17	Shining Light 2 Y-ORR G Rapture 6 Y-Y W	Jay Pengra Gerard Wayne			
Fortuna Garden Club, Fortuna, California; 350; 3/17	Suave 3 Y-Y G Signal Light 2 W-O W	Virginia Nesmith Christine Kemp			
Oxford Garden Club; Oxford, Mississippi; 515; 3/22	Daydream 2 Y-W G Festivity 2 W-Y W	Mrs. Farris Dendy Mrs. R.L. Young			
Southeast Regional and Georgia Daffodil Society; Atlanta; 929; 3/23	Twicer 2 Y-YOO G Estremadura 2 Y-O W	Otis Etheredge Beverly Barbour			
Southwest Regional; Arkansas Daffodil Society; Conway; 802; 3/24	Heron 2 W-P G Imperial 2 Y-Y W	Mrs. Wayne Anderson Mrs. R.C. Butler			
Rome Garden Clubs, Rome, Georgia; 914; 3/27	Symphonette 2 Y-Y G Court Martial 2 Y-R W	Daisy Seidel Dan and Judy Dunn			



Top award winners in several shows this year were: top left, Golden Joy; right, Daydream; bottom left, Jenny; right, Festivity.

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Maryland Daffodil Society; Baltimore; 979; 4/18	Strines 2 Y-Y G El Camino 6 Y-Y W	Anne Donnell Smith Mrs. Joseph Purdy
Upperville Garden Club; Upperville, Virginia; 365; 4/19	Dailmanach 2 W-P G Silver Chimes 8 W-W W	Frank Yazenski Frank Yazenski
Central Ohio Daffodil Society; Columbus; 646; 4/21	Joybell 6 W-Y G Canisp 2 W-W W	Kathy Andersen Handy Hatfield
Chambersburg Garden Club, Chambersburg, Pennsylvania; 1,087; 4/24		Kathy Andersen Marie Hartman
Garden Class of Federa- ted Woman's Club, Down- ingtown, Pennsylvania; 344; 4,	Vigil 1 W-W G Cantatrice 1 W-W W /25	Michael Magut Bea Billau
Indiana Daffodil Society, Bloomington; 1,144; 4/26	Ormeau 2 Y-Y G Churchman 2 W-GWW W	Donald Sauvain Mrs. Goethe Link
Northeast Regional, Dela- ware and Pennsylvania Daffodil Societies; Wil- mington; 808; 4/27	Bender 75/57 1 W-Y G Glenfarclas 1 Y-O W	Dr. William Bender Mrs. Marvin V. Andersen
Northeast Ohio Daffodil Society, Akron; 470;4/28	Charter 2 Y-W G Charter 2 Y-W W	Wells Knierim Wells Knierim
Kingwood Daffodil Society, Mansfield, Ohio; 703; 4/28	Gull 2 W-GWW G Daydream 2 Y-W W	Nancy Gill Handy Hatfield
New Jersey Daffodil Society, State show; Short Hills; 732; 4/29	Rich Reward 1 Y-W G Foundling 6 W-P W	Cathleen Riley Mrs. Richard Kersten
Nantucket Garden Club, Nantucket, Massachusetts; 290; 4/30	Constancy 2 Y-Y G	Jean MacAusland
New England Regional; Greenwich Daffodil Society; Greenwich; 955; 5/1	Loch Lundie 2 Y-R G Torridon 2 Y-R W	Richard Ezell Mrs. John T. Haskell
Western Reserve Daffodil Society; Cleveland, Ohio; 570; 5/2	Silken Sails 3 W-WWY G Achnasheen 3 W-W W	Mrs. James Liggett Mrs. Hubert Bourne
Northern New England; Dub- lin, New Hampshire; 610; 5/11	Achentoul 4 W-ORR G Jingle Bells 5 W-Y W	Mrs. John T. Haskell Mrs. John T. Haskell
Central Regional; Daffodil Society of Minnesota; Minneapolis; 532;5/12	Golden Amber 2 Y-O G Ivory Gull 5 W-W W	Julius Wadekamper Mrs. Goethe Link



Top left: Joybell, Gold Ribbon winner in Columbus; right; Early Mist, Gold Ribbon winner in Nashville; bottom left: Texas, White Ribbon winner in Dallas; and right: Charter, White and Gold Ribbon winner in Akron.

THE MAROON RIBBON

The Maroon Ribbon, for a collection of reverse bicolor daffodils, is usually won at a bit less than half of the shows in a season. This year was above average, with twenty-three winners in forty shows. But they came somewhat late, with one-fourth of the shows over before the third Maroon Ribbon was won.

The late season emphasized reliance upon old standard reverses. Seven flowers were mainstays: Daydream appearing in twelve winners; Rich Reward; Rushlight;

Honeybird; Dawnlight; Pastorale; and Charter.

But many newer, and sometimes smaller, reverse bicolors are becoming part of winning Maroon collections. Examples were Joseph Stettinius's collection which won in Baltimore and included two trumpets, Canemah and Chiloquin, the triandrus Lavalier, and two jonquils, Intrigue and Pipit. Mrs. John T. Haskell won the last Maroon Ribbon of the season with an all-jonquil collection, including Pipit, Canary, New Day, Dickcissel, and Step Forward.

Three exhibitors won this award twice in the 1984 show season. Mary Lou Gripshover used Bethany and Rich Reward in her collections both in Nashville and at Portland. Beverly Barbour staged Daydream, Moonspell, Grand Prospect, Charter, and Gin and Lime in Rome, and also won in Atlanta. Mrs. James Liggett used Chelan, Rich Reward, Cloud Nine, New Day, and Drumnabreeze in

Cleveland, and also won in Mansfield.

Very impressive collections won for Handy Hatfield in Columbus, who used Scholar, Century, Impressario, Pastorale, and Rich Reward; and for Mrs. John Bozievich in Chambersburg, who chose Teal, Intrigue, Big John, Daydream, and Grand Prospect.

Robert Spotts's winner at Ross, the earliest of the season, centered on Parody and Sun'n Snow; while a pair of Virginians, John Tarver at Hampton, and Frank Yazenski at Upperville, both selected Intrigue, Misty Meadow, and Daydream.



Winning the Maroon Ribbon in Nashville were Cocktail, Bethany, Rich Reward, Nazareth, and Honeybird.

At Greenwich, in the next-to-last show of this season, Dr. William A. Bender won the Maroon Ribbon with what may be the most spectacular five-bloom entry of the year. Many of us count ourselves fortunate to have seen one short-cup reverse bicolor daffodil in our exhibiting lifetime. Those who were at Greenwich were treated to a rare hint of things to come with Dr. Bill's Maroon winner of five of his own Division 3 reverse bi-color seedlings.

Reverse 3s have been a hybridizing dream of Dr. Bill's for years; many remember his seedling of ten years ago, #70/2, borderline between Divisions 2 & 3. Two seedlings in the Greenwich collection were Aircastle × 70/2; the other three were Lemonade crosses. Three in the group bloomed for the first time in 1984.

The days of a Daydream/Charter/Bethany/Honeybird/Rushlight parlay being a sure thing for a Maroon may be just about over.

THE RED-WHITE-AND-BLUE RIBBON

This year The American Daffodil Society Convention honored two Oregon daffodil hybridizers without whose work the daffodil world would be infinitely poorer; Grant Mitsch and Murray Evans.

Every year, the Red-White-and Blue Ribbon class, with its many entries and

spirited competition, pays continuing honor to these two men.

In the 1984 show season, the Red-White-and-Blue Ribbon was awarded in thirty-one of the forty shows. Three exhibitors won with a quintet of their own seedlings; every one of the other twenty-eight used some Mitsch and/or Evans flowers to win the award.

Six exhibitors used all-Mitsch collections to win: Lois Johnson in Rome; Mrs. John Payne Robinson in Gloucester; Mrs. David Frey in Scottsburg, who staged five Mitsch cyclamineus hybrids; Michael Magut, in Downingtown; Cathleen Riley in Greenwich; and David Karnstedt in Minneapolis, who won with five Mitsch poet hybrids.

Additionally, the four Red-White-and-Blue awards won overseas all went to Mitsch hybrids. In Sheffield, England, the award went to J. Dalton; in Solihull, England, it was won by Don Barnes; in Ballymena, it was won by Carncairn; and at the Championship of Ireland show at Enniskillen, Northern Ireland, Brian Duncan won the Red-White-and Blue with Silken Sails, Daydream, Aircastle, Silver Bells, and Eminent.

Predominantly Evans hybrids won the Red-White-and-Blue in Ross for Robert Spotts, who also took this award in Portland with Lapwing, Pink Angel, Oryx, Jingle Bells, and Waxwing. Nancy Whitlock in Wilmington, Mrs. William Cameron in Short Hills, and Christine Kemp in Fortuna also relied heavily on Evans hybrids.

The Gold Medal for service to the daffodil was awarded to Bill Pannill at the Portland Convention, and Pannill daffodils are beginning to figure significantly in the Red-White-and-Blue classes. Joseph Stettinius's winner in Chapel Hill featured Pannill's Highlite, Key Largo, and Crystal Blanc. Other winning exhibitors who relied upon Pannill hybrids were Spotts in Portland; Mr. and Mrs. Richard Frank in Louisville; Peg Macneale in Cincinnati; Nancy Whitlock in Edgewater, another double winner; Mr. and Mrs. M.S. Kraus, Jr., in Hampton; Handy Hatfield, in all three of his Red-White-and-Blue winners, in Chillicothe, Columbus, and Mansfield; and David Cook in Nashville.

Frank Yazenski used Dr. Tom Throckmorton's Star Trek, Spring Tonic, Johnny Walker, and Tom Jones to win the Red-White-and-Blue at Upperville. Elise Havens's registrations appeared in the Frank collection in Louisville, the Macneale group in Cincinnati, and the entry of Mrs. Goethe Link in Bloomington.



David Cook's R-W-B winner in Nashville included Precedent, Daydream, Pure Joy, Symphonette, and Irvington.

George Morrill's Pretty Miss appeared in the winning collections of Mrs. Morris Lee Scott in Hernando and the Spotts award winner in Ross. Mrs. R.C Butler in Conway used Kanouse's Inca Gold. Herman and Loyce McKenzie, who won both in Clinton and in Memphis, chose Charles Culpepper's Golden Starlight for the first entry and Eve Robertson's Limey Circle and Lyles McNairy's Lyles for the second.

Harold Koopowitz in LaCanada, Otis Etheredge in Atlanta, and Dr. William Bender in Chambersburg won the Red-White-and-Blue with five of their own seedlings. Gerard Wayne, in Corona del Mar, included three of his hybrids in his award-winner.

THE GREEN RIBBON

The Green Ribbon, awarded to a collection of twelve stems of different cultivars from at least four divisions, was won by twenty-three exhibitors in 1984. Winning two Green Ribbons were Mrs. Harold Stanford, in Conway and in Louisville; Mrs. W. R. Mackinney, in Chambersburg and Wilmington; and Mrs. James Liggett, in Cleveland and in Mansfield.

Superb Green Ribbon winners were those of Father Athanasius in Portland, including Purbeck, Centreville, Dividend, Pipestone, and White Star; Handy Hatfield's at Chillicothe, with Akala, Portfolio, Central Park, Carib, and Golden Joy; Mrs. Liggett's in Cleveland with Bluebird, Ice Wings, Clumber, Lapwing, and Loch Lundie; and Mrs. Chesterman Constantine's at Hampton, with Gold Convention, Silver Convention, River Queen, Pink Wing, and Rival. (I especially enjoyed the inclusion of King's Sutton, old, of uncertain vintage, quite small, but utterly charming, as the twelfth flower in that last entry.)

Also elegant were Donald King's entry at Chapel Hill, with Aurum, Broomhill, Grand Prospect, Ivy League, and El Camino; Celeste Cox's in Washington, including old favorites Asteroid, Carrickbeg, Butterscotch, and Tahiti; and Mrs. Mackinney's Chambersburg winner which featured Dovekie, Pasteline, Pinza, Celilo, and Patrician.

Smaller flowers predominated in the winning entries of Mrs. Stanford in Conway; Bob Jerrell in LaCanada; Gerard Wayne in Corona del Mar, including Ocean Breeze, Ibis, and Lavalier; and Mrs. David Frey's Scottsburg Green Ribbon

winner, with Tinker Bell, Trena, Rapture, Prefix, and El Camino.

Other Green Ribbon winners for the '84 season were Marilynn Howe in Ross; David Cook in Atlanta; Martha Anderson in Hernando; Mrs. Sarah Harrison in Gloucester; Mrs. Goethe Link, Bloomington; Cathleen Riley with a mostly-red-cupped entry at Short Hills; Richard Ezell in Greenwich; Julius Wadekamper in Minneapolis; and Donald Sauvain in Columbus.

THE PURPLE RIBBON

The Purple Ribbon, highly-coveted and a mark of exhibiting excellence, is nevertheless easy to enter (you're already in if you've a five-stem blue ribbon group not eligible for another ADS award), but hard to win (there's always a lot of competition). Purple Ribbon winners are always very beautiful, from Ted Snazelle's brilliant red-cups in an early Mississippi springtime, through Helen Link's dainty set of cyclamineus, to Dave Karnstedt's end-of-the season array of poet daffodils. And they're definitely a sign of the season.

This season was a late one, and the Purple Ribbon awards show it. Of the first twenty winners, six were Division 6. At Corona del Mar, Gene Bauer won with Rapture, Cazique, Swallow, Chaffinch, and Mitsch C 59/5. Mrs. Link's group included Tracey, Bonus, Cornet, March Sunshine, and Prefix. Others who won with cyclamineus this season included Elizabeth Entrikin in Hernando, Mrs. Harold Stanford in Nashville, Mrs. John Robinson in Chapel Hill, and Mrs. Henry Hobson in Cincinnati.



Sally Stanford used Charity May, Rapture, Beryl, Dove Wings, and Bushtit to win the Purple Ribbon in Nashville.



In Columbus, Nancy Gill won with whites: Cantatrice, Mountain Dew, Canisp, Wedding Bell, and Coho.

There's an affinity between white daffodils and Purple Ribbons. Gerard Wayne won the Purple in the season's first show at LaCanada with Canisp, Homestead, Cataract, Pristine, and Queenscourt, a collection which reporter Jay Pengra termed, "Excellent, really sharp." At the other end of the season, Anne Donnell Smith won in Wilmington with Knowehead, Stainless, Easter Moon, Verona, and Panache; while Wells Knierim was awarded a Purple at Akron for Queenscourt, Ulster Queen, Seafarer, Cantatrice, and Vigilante.

At shows in the middle of the schedule, white collections won Purple for Robert Spotts in Ross, Mrs. Raymond Lewis at Upperville, Nancy Gill in Columbus, and Mrs. W.R. Mackinney at Short Hills.

There are lots of Division 2 daffodils, so inevitably there are a great number of Purple Ribbon awards going to long-cup collections. Mrs. Harold Stanford's Purple winner at Portland was simply elegant, including Limpkin, Ben Hee, Resplendent, Pure Joy, and Euphony. Other Division 2 winners included Mrs. N.T. Whittington, Jr., at Princess Anne, Chauncey Maher in Washington, Donald King in Hampton, Donald Sauvain in Chillicothe, Marie Hartman at Chambersburg, and Mrs. James Liggett at Mansfield.

Otis Etheredge found a Purple Ribbon on his Division 3 set of down under short cups; Tia, Challenge, Potent, Hazelwood, and Coppertone. Division 3 also won for Lillian Hafely in Cleveland who staged a quintet of Rockall, Palmyra, Montego, Achduart, and Verona.

A set of brilliant red-cups is a good way to catch a judge's eye. In addition to Dr. Snazelle, others who took this route to a Purple winner were Beverly Barbour in Rome, Mrs. Alma Bender in Greenwich, and Donald Sauvain in Bloomington.

Barry Nichols had a unique Division 11 winner in Dallas, staging Rocky Horror, Mistral, Chablis, Square Dancer, and Dolly Mollinger. Junius Davidson in Memphis won with Division 7s: Dickcissel, Chat, Pueblo, and Quail. Mr. and Mrs. M.S Krause, Jr., took the Purple at the season's largest show, in Gloucester, with a

Division 8 collection of Highfield Beauty, Golden Dawn, Martha Washington, Geranium, and Matador. "Golden oldies" from Division 1 were winners for Mrs. R.C. Butler in Conway and Mrs. Luther Wilson in Louisville. Also winning Purple Ribbons were L.D. Watrous, Nantucket; Mrs. Thomas Avent, Oxford; and Mrs. John T. Haskell, Dublin.

Poet collections were winners for Mrs. Merton Yerger, who used her own seedlings at Edgewater; and Joseph Stettinius in Baltimore, with Emerald, Bright Angel, Cantabile, Webster, and Ace of Diamonds. David Karnstedt used Seraph, BonBon, Quetzal, Angel Eyes, and Tart.

THE MINIATURES

Miniatures are crowd-pleasers from California to Connecticut. A typical comment comes from Mabel Milner, chairman of Rome's first-year ADS show: "The general public was astonished at the number and diversity of the miniature daffodils." Across the continent, Nancy Cameron, chairman at Corona del Mar, called a "strong showing of miniatures to the general public" the most outstanding feature of the show, which had many bulbocodium and cyclamineus entries.

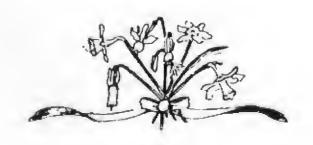
Lavender Ribbon entries were termed top attention-getters at Hernando, in Scottsburg, and in Edgewater; while Ohio show chairmen, Jack Ward in Akron and Charles Applegate in Mansfield, listed "All mini's" at the top of their favorites list. In Cincinnati, miniatures comprised 27% of the entries, and Greenwich's large show included 76 miniature entries.

Winners on both coasts are always noteworthy, especially when it is a little-known and unnumbered seedling from time past. Bonnie Bowers at Ross and Delia Bankhead in Washington both took Miniature Gold Ribbons with an unnumbered Broadleigh seedling, *N. atlanticus ×rupicola pedunculatus*, a self-yellow jonquil with a clean color and superb flat perianth. This exquisite small flower was in the winning Watrous collection in Nashville and in Atlanta, and was listed as one of the top half-dozen crowd pleasers at the large Chapel Hill show.

Twelve exhibitors won a Miniature Gold and/or White at two or more shows. Mrs. Goethe Link took the Gold in Minneapolis, Scottsburg, and Bloomington, and the White in Scottsburg and Cincinnati.

Mrs. Raymond Lewis won three times—the Gold in Gloucester and Upperville, plus the White in Chapel Hill. Mrs. James Liggett was also a triple winner, taking the Gold in Cincinnati, the White in Bloomington, and both at Chillicothe.

Double winners were Mrs. Donald Fletcher, the White at both Upperville and Hampton; David Cook, the Gold at Nashville and at Rome; Mrs. N.T. Whittington, Jr., with Golds in Edgewater and Princess Anne; Louise Dunn, earning Gold at Hernando, White at Conway; Nancy Gill, winning Golds in Columbus and Mansfield; Kevin McKenzie, a Gold winner both in Clinton and in Memphis; Nancy Wilson, with a Gold in Fortuna, both the Gold and the White at the National Show in Portland; Wells Knierim, the White in Akron and both miniature awards at the Cleveland show; and Mrs. Roland Hatcher with White at both Rome and Atlanta.



The winning flowers were: (1-Miniature Gold Ribbon; 3-Miniature White Ribbon)

HAWERA, 5 Y-Y
Christine Kemp, Ross 3
Kathi Leonardi, Fortuna 3
Mrs. Roland Hatcher, Atlanta 3
Mrs. Roland Hatcher, Rome 3
Mrs. George F. Parsons, Hampton 1
Mrs. Donald Fletcher, Upperville 3
Mrs. John Miller, Short Hills 1

XIT, 3 W-W
Mrs. Guy Carter, Memphis 3
David Cook, Nashville 1
Julie Coley, Louisville 1
Mrs. N.T. Whittington, Edgewater 1
Wells Knierim, Cleveland 1, 3
Mrs. James J, Tracey, Wilmington 3
Mr. and Mrs. Wellington Wells, Jr.,
Dublin 1

N. bulbocodium (various), 10 Y-Y
Harold Koopowitz, Corona del Mar 1
Marta Wayne, Corona del Mar 3
Mrs. W.R. Trott, Oxford 1, 3
Mrs. N.T. Whittington, Jr., Princess Anne
1
Nancy Gill, Columbus 1

APRIL TEARS, 5 Y·Y
Nancy Wilson, Portland 1, 3
Donald S. King, Chambersburg 1
Mrs. Helen S. Kaman, Dublin 3
Mrs. Goethe Link, Minneapolis 1

SEGOVIA, 3 W-Y Louise Dunn, Hernando 1 Mrs. Raymond Lewis, Gloucester 1 Donna Dietsch, Columbus 3 Mrs. William Taylor, Greenwich 3

N. triandrus albus, 10 W-W

Mrs. Chesterman Constantine, Chapel Hill 1 Mrs. Donald H. Fletcher, Hampton 3 Mrs. Johannes R. Krahmer, Wilmington 1 Mrs. William Taylor, Greenwich 1

SNIPE, 6 W-W Mrs. Raymond Lewis, Chapel Hill 3 Mrs. Merton S. Yerger, Princess Anne 3 Mrs. A. Gordon Brooks, Gloucester 3 Mrs. James Liggett, Chillicothe 1

MINNOW, 8 W-Y Louise Dunn, Conway 3 Mrs. Goethe Link, Bloomington 1 Nancy Gill, Mansfield 1 TETE-A-TETE, 6 Y-O Maxine Rankin, Clinton 3 Mrs. Goethe Link, Scottsburg 3 Mrs. Goethe Link, Cincinnati 3

YELLOW XIT, 3 W-Y Mrs. Thomas R. Towers, Baltimore 1, 3 Mrs. James Ligget, Bloomington 3

SUNDIAL, 7 Y-Y Patricia M. Crenshaw, Washington 3 Mrs. Edward Williams, Nantucket 1

WEE BEE, 1 Y-Y Kevin McKenzie, Clinton 1 Mrs. James Liggett, Chillicothe 3

JUMBLIE, 6 Y-O Mrs. James Walther, Dallas 3 Wells Knierim, Akron 3

CANALICULATUS, 10 W-Y Mrs. Patrick Haggerty, Jr., Dallas 1 Mrs. John Payne Robinson, Edgewater 3

N. rupicola, 10 Y-Y Nancy Wilson, Fortuna 1 David Cook, Rome 1

Broadleigh seedling
(N. atlanticus × rupicola pedunculatus)
7 Y-Y
Bonnie Bowers, Ross 1
Delia Bankhead, Washington 1

SUN DISC, 7 Y-Y Mrs. J. Duncan Pitney, Short Hills 3 David Karnstedt, Minneapolis 3



N. rupicola

GRIPSHOV





Left: Xit, winner in several shows; right: Stella Turk, Miniature White Ribbon winner in Nashville for Alice Wray Taylor.

Other miniature winners were:

Mite, 6 Y-Y: Mrs. J.C. Dawson, Conway 1

N. jonquilla, 10 Y-Y: Mrs. Richard Roof, Louisville 3

N. t. concolor, 10 Y-Y: Martha Anderson, Hernando 3

N. t. pulchellus, 10 Y-W: Bob Spotts, LaCanada 1

N. fernandesii, 10 Y-Y: Bob Spotts, LaCanada 3

Heidi, 6 Y-Y: Kevin McKenzie, Memphis 1

Stella Turk, 6 Y-Y; Mrs. Alex Taylor, Nashville 3

Hummingbird, 6 Y-Y: Mrs. James Liggett, Cincinnati 1

Raindrop, 5 W-W: Mrs. Raymond Lewis, Upperville 1

Atom, 6 Y-Y: Gordon Carpenter, Dowingtown 3

N. scaberulus, 10 Y-Y: Lillian Hafely, Akron 1

#79c (Mite × cyclamineus) 6 Y-Y: Mrs. Goethe Link, Scottsburg 1

#76-N-6 (Felindre o.p.) 9 W-GYR: Mrs. Merton Yerger, Dowingtown 1

#70 (Mite × N. jonguilla) 7 Y-Y: Curren Craft, Atlanta 1

#691/1 (Ruby × scaberulus): Mrs. George D. Watrous, Jr., Chambersburg 3

THE LAVENDER RIBBON

The Lavender Ribbon, for a blue-ribbon collection of five miniature cultivars and/or species, was awarded in twenty-nine of the forty 1984 shows. Eighteen of these ribbons went to eight exhibitors.

Mrs. James Liggett won four Lavender Ribbons—at Cleveland, Columbus, Bloomington, and Mansfield. Her Columbus and Cleveland entries, plus the winning entry staged by Bob Spotts at the Portland National Convention show, were the only three Lavender winners without a species among the five.

Double winners this season included Mr. and Mrs. Tommy Dunn, in Conway and Hernando; Bob Spotts, at Ross and Portland; Mrs. Goethe Link at the Scottsburg and Cincinnati shows; Mrs. George F. Parsons at Hampton and Gloucester; Mrs. Raymond Lewis, at Chapel Hill and Upperville; and a pair of Junior exhibitors, Marta Wayne at LaCanada and Ross; and Kevin McKenzie in Clinton and in Memphis.

The foundation of a successful Lavender Ribbon entry in 1984 rested on a half-dozen miniature cultivars. Only six of the twenty-nine winners did not include at least one of the following: Jumblie, Minnow, Xit, Tete-a-Tete, Hawera, and Segovia.



The Lavender Ribbon went to David Cook in Nashville for Hawera, Segovia, N. cyclamineus, Xit, and Fairy Chimes.

Mrs.Link's Scottsburg entry consisted of five of her own miniature seedlings, three of which were Mite × N. cyclamineus crosses. Her Cincinnati winner also created much interest. It included Candlepower, Snipe, N. watieri, #79-B (Mite × cyclamineus), and a rare species miniature, N. b. genuinus, which Mrs. Link says is a vigorous plant with good-sized golden flowers freely produced. She ordered it from the 1966 Jefferson-Brown catalogue.

Other Lavender winners which were special crowd pleasers were Mrs. Lewis's Upperville entry of Flomay, April Tears, Raindrop, Clare, and N.t. albus; Mrs. Liggett's Cleveland entry of Pango, Bebop, Clare, Sundial, and Bobbysoxer; and Donna Dietsch's Akron entry of Clare, Tete-a-Tete, Segovia, Pixie's Sister, and Bebop.

Other Lavender Ribbon winners for this spring included Christine Kemp in Fortuna; Mrs. Robert Hatcher, Atlanta; Mrs. Robert Gibson, Rome; David Cook, Nashville; Delia Bankhead, Washington; Mrs. John Payne Robinson, Edgewater; Joseph Stettinius, Baltimore; Wallace Windus, Chambersburg; Mrs. Johannes R. Krahmer, Wilmington; and Mr. and Mrs. Wellington Wells, Jr., Dublin.

THE SILVER RIBBON

For the second year in a row, Mrs. John T. Haskell, winning 46 blue ribbons at the Greenwich show, had the most awards to win a Silver Ribbon.

Four ADS members won Silver Ribbons in two shows: Frank Yazenski at Hampton and at Upperville, Joseph Stettinius in Chapel Hill and Baltimore, Mrs. James Liggett in Cleveland and in Mansfield, and Mrs. Verne Trueblood in Scottsburg and in Chillicothe.

Those garnering the greatest number of ribbons, in addition to Mrs. Haskell, were David Karnstedt with 27 in Minneapolis; Stettinius, 26 in Baltimore; Mrs. A. Gordon Brooks, 24 at Gloucester; and Father Athanasius at Portland and Mrs. John Payne Robinson at Edgewater, each with 23.

Other Silver Ribbon winners included Jay Pengra, Corona del Mar; Maxine Rankin, Clinton; Robert Spotts, Ross; Barrie Kridler, Dallas; Christine Kemp, Fortuna; Mrs. Thomas W. Avent, Oxford; Otis Etheredge, Atlanta; Mrs. R.C. Butler, Conway; David Cook, Rome; Mrs. Wayne Anderson, Hernando; Junius Davidson, Memphis; Mrs. Harold Stanford, Nashville; Mrs. N.T. Whittington, Jr., Princess Anne; Mr. and Mrs. Wellington Wells, Jr., Dublin; Richard Kersten, Short Hills; L.D. Watrous, Nantucket; Mrs.Luther Wilson, Louisville; Peg Macneale, Cincinnati; Mrs. E.T. Cato and Bonnie H. Jerrard (tie), Washington; Curtis Tolley, Columbus; Mrs. G.W. Burton, Chambersburg; Michael Magut, Downingtown; Mrs. Goethe Link, Bloomington; Mrs. Marvin V. Andersen, Wilmington; and Wells Knierim, Akron.

THE JUNIOR AWARD

Junior exhibitors made history this season. Imagine a 7-year-old Rose Ribbon winner or a 15-year-old winning a Watrous medal! It happened in Corona del Mar

and in Memphis.

When Carlene Pengra of LaCanada was three, she was unhappy about being left out of her older sisters' shopping expedition. Daddy Jay consoled her by saying, "Come help me plant the daffodil bulbs and seeds." When the fat round "bobs," as three-year-old Carlene called them, were all tucked away, and Daddy opened a packet of Phil Phillips's POPS seeds, he asked Carlene if she'd like to plant some of them for herself.

The result, four and a half years later, was that rarity, a pink trumpet daffodil, elegant and with smooth, shapely white petals, which not only won for Carlene the Junior Award at the Corona del Mar show, first of the season, but also the Rose Ribbon, and was runner-up for Best in Show. One can only wonder what other

POPS beauties will bloom next spring for this California third grader.

Meanwhile, in Memphis 15-year-old Kevin McKenzie of Jackson, Mississippi, won the Watrous medal. Kevin, now a ninth grader, won his first ADS award, the Lavender ribbon, when he was seven. He stages not only his collections but those of his parents, and has a penchant for arranging a collection of three blooms in a Hogarth curve, rather than a triangle. (Try it sometime with the cyclamineus hybrids; it works.) His adult ADS friends quit telling him not to, after he won the White Ribbon with Willet at the National Show in 1980 in Memphis. This year he won Miniature Golds, in Clinton with Wee Bee and in Memphis with Heidi, and also won Lavender Ribbons in both shows.



In Memphis, Kevin McKenzie won both the Watrous Medal and the Lavender Ribbon.

A multi-talented young Californian, Marta Wayne, in addition to maintaining an outstanding school and extra-curricular record, continues to be what a show chairman last season termed, "one of the finest daffodil exhibitors on the West Coast." This spring Marta, who has one more show season in junior competition, won the Junior Award at LaCanada with Jenny, and the Lavender Ribbon both at Corona del Mar and at LaCanada, using *N. cyclamineus* and Jumblie in both collections. She also won the Miniature White Ribbon at Corona del Mar with bulbocodium.

Junior award winners are up from last season's nine in ten shows. In 1984, sixteen under-18 exhibitors won this award.

Other winners this year include Blaine Snazelle at Clinton with Jetfire, which also won the Gold Ribbon for him; Eden O'Brian in Ross with Lunar Sea; Jeff Stanfields in Fortuna with Mrs. Backhouse; Susan Baird in Oxford with Actaea; Dawn Frazier in Atlanta with Fine Gold; John Wayne Anderson in Hernando with Brian's Pink; Shannon Davidson in Memphis with Red Sun; Justin Zapp in Nashville with Sidhe; Virginia Clover in Louisville with Beryl; Laurie Gill in Columbus with Galway; Leslie Gill in Mansfield with Easter Moon; David Mrak with Daviot in Dublin; and Alex Karnstedt in Minneapolis with Moonmist.

Encouragingly, four show reports were marked "Returned," where last year they said "Not offered." That's progress. Next season—a winner? We should continue to motivate more under-18s to enter our shows. It's the one place I know where they can eat their cake and have it, too—enter their own divisions when they wish, and take on adult competitors if their gardens and the seasons allow.

THE ROSE RIBBON AND OTHER SPECTACULAR SEEDLINGS

The horse-racing circuit didn't have a Triple Crown winner this year, but the ADS did. Dr. William A. Bender's #75/57, from POPS seed, won the Rose Ribbon and the award for Best American Bred flower at the Columbus show, took the Rose Ribbon and was a part of the winning Red-White- and-Blue collection in Chambersburg, and won both the Rose Ribbon and the Gold Ribbon in Wilmington.

#75/57 is a 1 W-Y, and a synopsis of the enthusiastic comments of those privileged to see it in person distills its beauty: "Perfect form and color, with a clear rich light gold cup, and a distinctive broad rounded perianth, with each petal perfectly shaped." It will definitely be something to look forward to at the Wilmington National Convention Show.

Dr. Bender also won the Rose Ribbon in Greenwich with #82/54, a 3 Y-W, (Lemonade × Moonfire), from his striking Maroon Ribbon collection of his Division 3 seedlings. At Chambersburg his Red-White-and Blue winner included three from POPS seed: 80/69; 80/7; and 75/57; in addition to his 69/1 (Arctic Gold × Chemawa) and another first-year bloom, 84/2 (Glenbush × Kuprena.)

Mrs. Merton S. Yerger also had a very successful seedling season. A Division specialist, her awards came for standard and miniature poet seedlings, ten of which will be registered this year. Her Rose Ribbon at Princess Anne was won by #74-B-3-4, 9 W-GYP, (Poet seedling × Milan). Her Purple Ribbon winner in Edgewater included 76-J-14, 76-#-1. 74-C-1-1, 74-B-3-2, and 75-0-4. The group included Sea Green o.p.; Smyrna, Red Rim, and Milan pollen on unnamed poet seedlings; and Praecox grandiflora × Lights Out.

Sid DuBose won the Rose Ribbon at the National Show in Portland with #G23-74, 2 Y-Y (Daydream × Camelot); and also added a Rose Ribbon in LaCanada with #A14-1, 2 Y-Y (Aircastle × Salmon Trout), a smooth lemon-colored flower, slightly surprising from this parentage, which was runner-up for Best in Show.



Top left: Sidhe, Junior Award winner for Justin Zapp in Nashville; right: Dubose G23-74, Rose Ribbon winner in Portland; bottom left: Ken Dorwin's Miss Prim, seen at the Corona del Mar show; right: Beery JS-20-FR, Rose Ribbon winner in Chillicothe.

The West Coast is a veritable hotbed of hybridizers. In addition to Sid DuBose and Carlene Pengra, the seven-year-old who won the Rose Ribbon at Corona del Mar, five other hybridizers have had significant success in the 1984 shows.

At the Corona del Mar show, Gerard Wayne won the Red-White-and-Blue with a group which included three of his own seedlings, a 6 W-P from Lilac Delight $\times N$. cyclamineus; D 9/1 [C/29-1 \times (Red Ranger \times Majorca)]; and D-7/1 (Cordial \times N. cyclamineus). Also seen at this show was Ken Dorwin's Miss Prim, a 2 Y-Y, probably to be introduced this year by Bill Roese. According to some daffodil folks on the West Coast, Miss Prim is "the smoothest 2 Y-Y ever seen."

Bob Jerrell won the Rose Ribbon at Ross with #68-81-1, a 2 Y-O (Ardour × Falstaff), and also won two local show awards this spring for hybridizers. Also at Ross, Mary Dunn exhibited a beautiful long-cup seedling (Daydream × Verran), an unusual Division 2 flower with a cream perianth flushed greenish, and a cup of

peachy-pink.

Harold Koopowitz won the Red-White-and-Blue Ribbon with his own seedlings at LaCanada:C172,2 Y-YRR; Y78/2, 2 Y-WYY; M278/2, 9 W-YYR; M478/1, 7 W-

Y; and X78/2, 7 W-PPY.

Swinging back across the South, Barrie Kridler won the Rose Ribbon in Dallas with a 2 Y-Y, #4-6-83(Ice Follies × Carlton); Mildred Scott was awarded the Rose Ribbon in Hernando for CC-2-84, a 2 WY-Y; and Mary Lou Gripshover won in Nashville with a 1 W-Y, #76-44-2 (Tudor King × Trousseau). Mrs. O.L. Fellers in Conway had a distinctive Rose Ribbon winner, in #78-S, a 4 Y-Y (Clown self-pollinated), good form with an unusual double-frilled center.

Otis Etheredge was the Rose Ribbon winner at the Atlanta show. His #G-87, a 2 W-Y, Tillicum × Accent, took top honors. Otis also had a Red-White-and-Blue winner with five of his seedlings: F-5a(Abalone × Accent), I-74-1 (Pinafore × Ringstead), I-25-7 (Cinel × Loch Stac), I-22-5 (Checkmate × Shining Light), and captivating little G-7 (Bantam × Loch Stac), which I offered to test in my garden as

soon as I saw a slide of it.

Stephen Haycock's #AW-P/1, a 2 W-P (Accent o.p.), won the Rose Ribbon at the Washington show. Dr. John L. Tarver, Jr., took a Rose at Hampton with #Sdlg. 7752, a 2 W-P (Leonaine × Pannill I-98). In Chillicothe, Betty Beery's 1 Y-Y, #JS-20-FR (Ormeau × Sileveboy), not only won the Rose but was runner-up for Best American Bred flower in the entire show. In Cincinnati, Mr. & Mrs. Dalton Battin won the Rose with a 1 W-W from Trousseau open pollinated. An early-season flower at the latest of shows took a Rose Ribbon for David Karnstedt, who won the Rose Ribbon in Minneapolis with #J-112-1, a 6 Y-Y (N. jonquilla × N. cyclamineus).

Diversity seems to be the current name of the game in hybridizing. A great many people working in varying directions can only mean the opening up of new

frontiers for the daffodil.

THE MINIATURE ROSE RIBBON

Mrs. Goethe Link won the Miniature Rose Ribbon with her tiny seedlings in two shows in 1984, in Cincinnati and in Minneapolis; and she won the Miniature Gold in Scottsburg, where the Miniature Rose was not offered. This double victory was duplicated by Mrs. Paul Gripshover, the winner both in Portland and in Nashville; and Mrs. George D. Watrous, Jr. in Chambersburg and Washington.

Mrs. Link's winner in Cincinnati was #677, a 6 Y-Y (N. cyclamineus × Candlepower), while her #1880 in Minneapolis was a Division 3 miniature, Sweet Music × Pewee. Her Miniature Gold Ribbon winner in Scottsburg was #79C

(Mite × cyclamineus).



Gripshover 75-3-2, Miniature Rose Ribbon winner in Nashville.

Mrs. Gripshover's Miniature Rose winner at the National Convention show was #73-1-5, a 6 Y-Y (Bagatelle × N. cyclamineus), while her #75-3-2, a 1 W-W (Candlepower × Colleen Bawn) took the top honor at the regional show in Nashville. It also appeared in her Watrous winner at Nashville, along with her #73-3-2, 1 Y-Y (Topolino × Lilliput).

Mrs. Merton S. Yerger won the Miniature Rose and the Miniature Gold in Dowingtown with two different small seedlings. The Miniature Rose winner was 75-H-2-1, a 9 W-YYR (hellenicus × Lights Out), a sibling of Wag-the-Chief. The Miniature Gold was awarded to #76-N-6, a 9 W-GYR, Felindre o.p.

Mrs. Watrous won the Miniature Rose Ribbon at the Washington show with #742, a 6 W-W [Titania × (Mitzy × N. cyclamineus)], while her winner in Chambersburg was 661/6 (Apricot × calcicola) 2 W-P.

Other 1984 winners of this prestigious award were Bob Spotts at Corona del Mar with #83-1, a 10 W-W, N. watieri o.p.; Nancy Wilson in Ross with CIB-1, 10 Y-Y, N.b. nivalis o.p., "the tiniest bulbocodium ever exhibited here," according to show chairman Jack Romine; Barrie Kridler in Dallas with #4-1-83, a 1 W-Y; Romine at LaCanada with #73-1, a 12 Y-Y, a bulbocodium hybrid; and Curren "Buz" Craft in Atlanta with #70, a most unusual 7 Y-Y, (Mite × N. jonguilla).

THE ARTISTIC CLASSES

Whether the floral arrangements at ADS shows are few in number but high ir quality, as they were at Chapel Hill and Bloomington and Cleveland, or total forty-plus at strong area-organized daffodil shows, as at Ross and at Hernando, they add beauty.

What's more, they often add people, impressionable show visitors, in the persons of flower arrangers who might otherwise never think of attending a daffodil show.

Notice that the shows with vast numbers of arrangements are often like Nantucket, with its strong community involvement and a vast array of daffodil-related activities. The non-ADS show in Lawrence, Kansas, falls into this same category. Or perhaps consider the forty-eight arrangements at a first-year ADS show in Rome, Georgia, sponsored by the Federated Garden Clubs. Or the sixty at Downingtown, where the ADS daffodil show is only one part of a much larger horticultural display by the Woman's Club.

We should broaden our own capabilities with the daffodil, learning to do more with it ourselves than just using foliage to achieve the right pose for a single stem in a test tube. The garden club ladies in these large arrangement sections can teach us how.

But it works both ways. The artistic classes are also a bridge across which we can invite these knowledgeable horticulturists to walk, to learn more about our plant specialty.

The most unusual artistic section of the season was the Sogetsu Design exhibition at the CODS show in Columbus, which Nancy Gill said ". . . was fantastic and created a lot of comments."

THE EDUCATIONAL DISPLAYS

While there are no specific ADS awards for educational displays, most shows do include some type of educational exhibit. Shows which are also approved by the National Council of State Garden Clubs, Inc., can offer that organization's award provided the exhibit scores 95 points. Mrs. Harry Johnson, Jr., staged such an award-winning exhibit on "Daffodil Propagation and Growing" at the Rome, Georgia show, showing twin scales, first-year and third-year seedlings, and mature bulbs along with literature which was available for the public. Nashville's exhibit was comprised of pictures of the various species and their geographical origins; while literature was provided on culture, classiffication, hybridizing, and good, inexpensive cultivars.



ONLY AT THE NATIONAL

Even a blue ribbon for a single stem takes on added luster with the phrase "National Show" appearing on it. And we're well aware of how coveted, sometimes a year or two in advance, are the Gold versions of the Quinn and Watrous medals, signifying those awards were won at a National Convention Show.

In a singular category of their own are those awards which can be won only at National Convention shows. Two West Coast exhibitors achieved this high level

of victory at Portland.

Robert Spotts won the Matthew Fowlds Silver Medal with the vintage Coleman all-white cyclamineus Jenny, and the Olive Lee Trophy for the very new and

impressive Pannill jonguil, Jingle Bells.

Father Anthanasius was undoubtedly champion not only of Oregon and North America, but also the British Isles. He won the English award with Ben Hee, Dailmanach, Sabine Hay, Purbeck, and Breakthrough; the Northern Ireland award with Fintona, White Lion, Tullybeg, Galahad, and Ulster Bank; and the Carncairn trophy with Glacier, Tudor Minstrel, Amber Castle, Northern Light, and Verona; in addition to the Gold Quinn Medal for 1984.



WHICH FLOWERS WERE FAVORITES?

Some shows sponsor an official poll; at others, the show chairman just listens. Either way, he or she arrives at a pretty good understanding of what excited the public most on the show bench in a particular springtime.

Appropriately, for a season in which deep and brilliant color was enhanced by a late, wet, cold season, many, many shows gave top ratings to the reds, the pinks,

or to a striking array of both.

The first-year show in Upperville cited Gracious Lady and Dailmanach as No. 1. In Conway, "All who saw Heron, a beautiful 2 W-P with a large white flat perianth and light pink crown, were fascinated and tried to get a bulb." At Oxford, Mitsch's #34-22 was admired, "as always." Jack Ward, show chairman at Akron, singled out Foundling, Dailmanach, and Dear Me as the crowd-pleasers.

Nashville's hit parade was topped by Foxhunter and Resplendent, while Estremadura was the talk of the show in Atlanta. Also in Atlanta, Twicer, the Jackson 2 Y-YOO introduced in 1981, not only won the Gold Ribbon and plaudits of the crowd, but a silver trophy presented in memory of Bill and Mildred Simms by Mr. and Mrs. Sheldon Simms, Mr. and Mrs. Steve Simms, and Mrs. Sarah Simms.

Pink and red together made headlines in Chillicothe, where Arctic Char, Tahiti, and Birdsong were favorite cultivars; in Mansfield where Creag Dubh, Phantom, and Sentinel were the choices; in Dublin, where show-goers singled out Cherry Spot, Achentoul, and Tahiti; and at Minneapolis, where Joan Cooper reported that Zanzibar, Ambergate, Golden Amber, Luscious, and Stratosphere were scene-stealers.

Perhaps Bloomington's honor roll best illustrates the mixture that enchanted visitors in 1984: Lilac Charm, "with its exquisite color and form," Widgeon, "with its lovely orange-sherbet colored cup," "an exquisite Rubra, as well as a very large wax-like Carib." In fact, "all the very bright orange and red cups, and an array of unusually well-colored pinks," notes Donald Sauvain.

Whites won praise, too: Big Sur in Gloucester; Gull at Mansfield; Canatrice in Greenwich; and "all the whites with green eyes" at Nantucket.

Split corona daffodils were conversation-starters in Dallas, where a Division 11 won the Gold, and five of them won the Purple. This division was also tops in

Memphis and in Nashville, where Colorange was singled out.

In the early-season regional at Conway, local growers were amazed at Grand Soleil d'Or, a 8 Y-O, with seventeen flowers to a single stem, vivid color and excellent form. This was only the second time in ten years for this cultivar to bloom in Arkansas; the exhibitor had ten blooms, all perfect, to bring to the show and bring forth oh's and ah's.

Chapel Hill had an eclectic set of favorites: the cyclamineus Andalusia, the new Pannill 8 W-Y Chorus Line, the tazetta Grand Monarque, the new pink trumpet

Lorikeet, and the miniature Snipe.

At Portland, everyone was talking about an extremely well-grown Dividend, plus the white double Androcles from the commercial exhibits. The other three noteworthy cultivars at the National Show were the 5 W-Y Jingle Bells, the 2 W-P Fintona, and 3 YO-ORR Ulster Bank, with "great substance and color contrast."

Early in the season, at LaCanada, show stoppers were the self-yellow Akala and whites Ben Hee and Homestead. Shining Light had another good year, Durango "was impressive with the strong flare to the cup," and the new Mitsch 6 W-W, Cazique, won a special award for the top cyclamineus hybrid.

Near season's ending, at the Princess Anne show, the talk of the occasion were

the poeticus seedlings exhibited by Meg Yerger.

DAFFODIL FOLKS GET AROUND

You never know what people will ask. Biddy Dean, show chairman in Louisville, tells of the visitor who, after gently touching the blooms to see if they were real, inquired, "Is this a traveling show? Where is it going next?"

The daffodil blooms themselves don't go from show to show (well, mostly they don't), but daffodil people surely do. Every daffodil family who has lived out of boxes and cans because the refrigerator stays full of daffodil blooms all spring knows, "If it's the second Saturday it's got to be Hampton (or Washington or Edgewater or Cincinnati.)"

It's not unusual for exhibitors to enter three or even four shows in a single season. But this year's Peripatetic Exhibitor's award, a re-folded road map, would have to go to Kathy Andersen of Wilmington, Delaware, and Naomi Liggett of Columbus, Ohio.

Naomi won ADS awards in six shows during the 1984 season. Considered a superb grower of miniatures, she won Lavender Ribbons in Mansfield, Bloomington, Cleveland, and Columbus, plus Miniature Whites in Chillicothe and Bloomington. She added a Miniature Gold and a Watrous Ribbon in Cincinnati; plus a Purple, a Gold, and two each of Maroon, Green, and Purple with her equally fine standard daffodils.

Kathy won awards in five ADS shows in five different states, and judged at Hampton and at the National Convention show in Portland. From her impressive garden she staged Quinn Ribbon winners in four shows--Greenwich, Short Hills, Wilmington, and Columbus. She added Gold Ribbons in Columbus and Chambersburg, and at Wilmington took the White, the Bronze, and the Silver.

AN ENTHUSIASTIC WELCOME . . .

Nineteen eighty-four witnessed a record number of American Daffodil Society accredited shows: forty.

New this season to the official roster were the shows in Rome, Georgia, the last weekend in March; and the show in Upperville, Virginia, the third weekend in

April.

Mabel Milner, of the Mountain View Garden Club, was show chairman at Rome, where the show was sponsored by the city's Federated Garden Clubs, Incorporated. The schedule was excellent, beautifully written by a group new to ADS, and participation was incredible—914 blooms in a first-year show. The show, which was held in the River Bend Mall, astonished the general public at the number and diversity of miniature daffodils.

Mrs. William Taylor was chairman of the Upperville show, a small show sponsored by the Upperville Garden Club. The show-stoppers were the White Ribbon winner, Silver Chimes, which Janet Taylor says "is not grown in our area;" John Lea's fabulous Dailmanach; and Frank Yazenski's Red-White-and-Blue collection of Dr. Tom Throckmorton's hubrids.

A sister show that does an astonishing number of things to bring daffodils before the public is that of the Daffodil Club of Lawrence, Kansas, which pulls in the general public with everything from daffodil-appliqued quilts to the traditional continuous slide show of daffodils by the Lawrence Camera Club. By now this group could write the manual on effective daffodil-focused arrangements. This season they had still more innovations: a functional table set for breakfast with a daffodil centerpiece, designs suspended from nylon cords attached to the ceiling, and an expanded section for the lighted 6" × 6" "niches" for arrangements of miniature daffodils. Any group which can do all this should, and I hope soon will, take the few small steps toward ADS accreditation.

Don Barnes, of Sheffield, England, sends yearly greetings to the ADS and word of their local daffodil show, sponsored, surprisingly, by the Sheffield Chrysanthemum Society. This year they were no longer "under canvas," avoiding past seasons' weather calamities, but were in the new Botanical Gardens Centre. The ADS White Ribbon went to Barnes's vase of Merlin. Fifteen exhibitors staged 109 competitive exhibits.

. . . AN ELEGANT WAY TO SAY GOODBYE

Daffodil lovers throughout the ADS, not just those in the Cleveland area, have enjoyed Mary Knierim's friendship throughout the years. So I felt that they would enjoy, too, a sharing of the tribute paid to Mary at the Western Reserve Daffodil Society Show in Cleveland.

Mary's favorite daffodils were the whites, so Wells Knierim sponsored a Mary Knierim Trophy class: six white cultivars, three stems each. However, not only this trophy class but almost everything in the Cleveland show was predominantly white, in tribute to Mary.

Five entries in the trophy class, an all-white entry in the Green Ribbon class, six collections of five whites, an American-Bred entry of five Bill Pannill whites, even the vases of three in the miniature classes were white. Half of one wall was vases of three whites, all perfect daffodils, many of them entered by Wells himself, in a perfect tribute to a beloved wife who will also be missed by a much larger circle of daffodil friends.

JOHN LEA

In May the tragic news came of the sudden death of John Lea while he and his wife, Betty, were fishing in the Western Highlands of Scotland. It was an ovewhelming loss for his family and also a tremendous loss for his compatriots in the British Isles and for his many American friends. He has left a legacy of beautiful flowers for daffodil growers everywhere. Some are bold beauties of glowing color, others are delicately tinted or of immaculate white, but all are of elegant form.

John Lea began showing daffodils at the Midland Daffodil Society shows and won Best Bloom in 1951 with a bloom of Cantatrice. Within two years he was winning most of the major prizes and trophies at that show and had embarked on a breeding program. Before long he was contending in the London shows of the Royal Horticultural Society, and in 1961 won the Best Bloom award there with a flower of his own breeding. This cultivar was Canisp and it has proved to be a well-nigh unbeatable show flower when well grown. It won Best bloom awards in both London Shows in 1983, twenty-three years after it was registered.

Beginning in 1970, the list of John's show successes in London is formidable. His cultivars have won the Best Bloom Award fifteen times in either the RHS Competition or RHS Show, sometimes both. He first won the Engleheart Cup in 1971, repeated in 1973, and since 1975 has won it every year, including 1984. In 1972, he was presented with the Peter Barr Memorial Cup of the RHS for pre-

eminent work with daffodils.

This remarkable success was achieved in spite of two limiting factors: the small area of garden space which was devoted to raising seedlings, and the fact that his business commitments in Scotland kept him away from the garden except on weekends. In recent years, however, he had been able to spend more time with his daffodils.

The man who raised these flowers was a perfectionist and a keen competitor, but also he was a kind, generous friend. He shared the pollen from his-prize-winning beauties with other hybridizers; at shows he took the time to answer questions from hopeful exhibitors; he wrote many articles for RHS Yearbooks with the purpose of helping others to achieve success while growing, showing, and breeding daffodils.

Though reserved and business-like at meetings and such events, John was a delightful host or guest on more relaxed occasions. One time, when reminiscing about his boyhood, he told about his first acquaintance with daffodils as a toddler when he decapitated all of his father's prized blooms. Another recollection included the description of a "rocket-fired" car which he built in his youth and rode at high speed down the lane, narrowly escaping fatal injury on one occasion.

Yes, he has given us a host of beautiful flowers, but more than that, he has been our friend, and we shall miss him.

Memorial Contributions

John Lea	Mr.	and	Mrs.	John	B.	Capen
Phil Phillips	Mr.	and	Mrs.	John	B.	Capen

BULLETIN BOARD

FROM THE PRESIDENT'S DESK

The 1984 daffodil season was unpredictable in the Midwest Region. The cold spring made for successful late shows; however, the quality of the shows was good: most were quite large and classes well filled. My last daffodil entry in a show was made with a late blooming seedling which won a blue ribbon in my garden club show held on May 22.

When judging in five shows this year, I noted there is difficulty in Division 2 with the placement on the show table of blooms with colored perianth, cup predominately orange or red, and those with yellow perianth, cup rimmed orange or red. In some of the shows the same cultivar appeared in both classes because one exhibitor placed the entry as classified in *Daffodils to Show and Grow*, and another exhibitor placed the same cultivar in the other class where it looked correct along side of others already there. Regardless of the color code, blooms of the same cultivar should be placed in one class, preferably where classified in *Daffodils to Show and Grow*. The exhibitor may not change the color code; however, a change can be made if enough exhibitors discover that a certain cultivar is not coded correctly. Our ADS Classification Chairman should be contacted.

The words "color predominant" usually mean the same color in at least two cup zones. Weather and soil conditions can make a difference in color, especially depth of color. In my garden I often have some 2 Y-R cultivars in a clump which would fit the 2 Y-YYR classification at a certain stage of development, but as the blooms mature the color deepens to the base of the cup.

It was interesting to attend the Central Region show held in a shopping mall in Minneapolis the second weekend of May. The show was well staged by a very small group of people. Entries were of good quality, and at times it was difficult to decide the blue ribbon winner; several could easily have won best of show. The show was noteworthy because it proves a very small group can put on a good show and can get our cause before the public. The one question most frequently asked by the visitors was, "Where can I get a bulb of this one?" Can we ask for better publicity?

Helen K. Link

DAFFODIL JOURNAL WINS AWARD

The National Council of State Garden Clubs, Inc., at its annual meeting in Albuquerque, New Mexico, presented The Award of Merit to the American Daffodil Society for the four issues of the Daffodil Journal for 1983. According to the Awards 1984 booklet, "The Daffodil Journal is an excellent quarterly magazine published to assist in the education of members in horticulture, classification, and judging of daffodils." This marks the fifth consecutive year we have received this honor. Congratulations and thanks are due all authors, photographers, and others who keep our Journal in the forefront of successful horticultural publications.

CONVENTION-GOERS, TAKE NOTE!

The 1985 ADS Annual Convention will be held at the VALLEY FORGE HOLIDAY INN, KING OF PRUSSIA, PENNSYLVANIA, instead of the Wilmington Hilton as previously announced.

WHERE CAN I GET. . .?

Cultivar

Cristobal 1 W-Y

February Bicolor

Royal Jester 2 Y-R Royal Palace 2 Y-O Royal Charm 2 Y-R

Zambezi 2 Y-O

Desired by:

Frank B. Galyon, 816 Tanager Lane

Knoxville, TN 37919

Ian Erskine, 2 Coolnevaun, Stillorgan Blackrock, County Dublin, Ireland

REQUEST FOR SHOW DATES

Daffodil show information for 1985 should be sent to the Awards Chairman, Mrs. Hubert Bourne, 1052 Shadyhill Dr., Columbus, Ohio 43221, by October 1, for inclusion in the December issue of the *Journal*. Information needed includes: name of sponsoring organization, date of show, type of show, city in which it is to be held, location of show, and name and address of person to contact for information.

State or Regional Shows need prior approval from your RVP. The signed form must accompany the notice to the Awards Chairman. Your Regional Vice President, not the Awards Chairman, decides rotation on Regional Shows. RVP'S needing a supply of these forms may obtain them from the Awards Chairman.

COMING EVENTS

April 24-27,1985

ADS Convention, King of Prussia, Pennsylvania

NOMINATIONS BEING ACCEPTED FOR ADS MEDALS

Members are reminded that nominations for the Society's Gold and Silver Medals must be submitted to the President of the Society (in triplicate) by January 1, 1985. Nominating statements of 200 words or less may be made by any member of the Society and seconded by another member.

DAFFODILS TO SHOW AND GROW, 1985 EDITION

The 1985 edition of *Daffodils to Show and Grow* should be available by December. The price will remain the same--\$4.00--and those members wishing to place early orders may do so by sending a check to the Executive Director, who will mail the books as soon as they are received.

COOK'S CORNER

Requests have been received for the recipes of several of the "goodies" served on the tour in Oregon. Estella Evans and Elise Havens have kindly shared the following recipes.

Sandy's Sugar Cookies

1 C. powdered sugar 4 C. flour - plus 4 heaping T.

1 C. granulated sugar
1 C. butter
1 C. Mazola oil
1 t. soda
1 t. vanilla
2 eggs

1 t. salt

Cream sugars, butter, and oil until light and fluffy. Beat eggs and vanilla into sugar mix. Add dry mixture. Roll into balls and press with glass dipped in sugar. Bake at 350° for 10 minutes.

Applesauce Bread

 2/3 C. shortening
 1 1/2 t. salt

 1 3/4 C. sugar
 1/2 t. baking powder

 4 eggs
 1 t. cinnamon

 2 C. applesauce
 1 t. cloves

 2/3 C. water
 2/3 C. walnuts

 3 1/3 C. flour
 2/3 C. raisins

3 1/3 C. flour 2 t. soda

Heat oven to 350°. Grease two loaf pans. In large bowl, cream shortening and sugar until fluffy. Stir in eggs, applesauce, and water. Blend in flour, soda, salt, baking powder, cinnamon and cloves. Stir in nuts and raisins. Bake 70 min. or until toothpick comes out clean.

FROM THE EDITOR'S DESK

Reports received from various quarters seem to indicate that the post office let us down again. Our Publications Chairman, Mary Cartwright, had the *Journal* in the mail the first week in June, and many of the reports we got indicated that you received it the last week in June. We apologize for the delay, and wish there was something we could do about it.

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AMERICAN DAFFODIL SOCIETY LIBRARY

Publications in the American Daffodil Society Library are available to members on loan. Please address all correspondence to Mrs. W.D. Owen, 4565 Rheims Pl., Dallas, TX 75205.

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THOUGHTS

(After A Season of Long Necks)

A swan's neck is graceful.

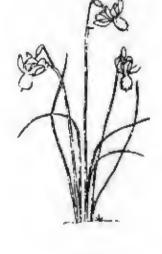
Its length adds to its charm;
And Cleopatra's lengthy neck
Was not what brought her harm.

A long and lovely neck, Upon which sat a curl, Gave Dana's wife her fame As the handsome Gibson girl.

A beautiful long neck Is rumored as the cause Of forgetting its a 'vayse' And calling it a 'vahse'.

When such precedent is found,
One is tempted to expound;
A daffodil's long neck is swell,
If the flower holds it well!

BETTY P. KRAHMER, Wilmington, Delaware



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MORE COMMENTS ON THE COMMENT OF HAROLD CROSS

FRED SILCOCK, Mt. Macedon, Victoria, Australia (from the Tasmanian Daffodil Council Newsletter, March, 1984)

Harold's comments on this occasion were made a short while ago in one of his letters to me. Harold commented upon the seemingly low germination rate of daffodil seed planted over a period of many years by Lionel Richardson of Ireland. Harold quoted details from a recent issue of the half-yearly publication put out by the Northern Ireland Daffodil Group and no doubt he was comparing those details to usual germination percentages commonly occuring in Australia.

This comment set me thinking and I'm wondering if the germination percentages of the Richardson seeds is something to be said of germination rates

of all daffodil seed sown in Ireland.

If it is the case that higher germination rates are obtained in Australia I'm further wondering what the reason could be. Could it be because of the higher summer temperatures and/or longer summers that we have in Australia?

From time to time one does read an expert who stresses the importance of a summer 'baking' to the successful germination of daffodil seed. I can remember reading a few years ago an article by Dr. Mike Temple-Smith in which Mike spoke of some tests that he had carried out and as a result formed the view that a lengthy period of summer heat was something seed needed to be subjected to if a high germination rate was to be obtained. Also, in the December, 1981, issue of the American Daffodil Society Journal, Theodore E. Snazelle, Ph. D., told of his keeping of seed in a refrigerator for a prolonged period immediately prior to planting and obtaining a very low germination rate.

There have been some notable Australian hybridists who, at different times, said to me that early planting produces the best germination results. In every case they did not go on to say why early planting was best and I think it is probable that they did not know why. Probably they had simply observed that early planting brought about the best strike and they had thought no more on the matter. Of course, early planting would mean that seeds would be subjected to a longer

period of summer heat than if they were planted later.

From personal experience I can at least attest to the amount of heat daffodil seeds are capable of withstanding. My planted seed from the 1982 harvest went through the Ash Wednesday bushfires of last year. At the height of the fire, at the time it reached me, the heat in the vicinity of the beds was so intense that fire was creating itself out of nothing. The air was acting as a torch. Walls of flame, feeding upon nothing and as high as a house, would suddenly appear then disappear. Flammable objects, fences, etc., burst into flames without fire touching them. Fireballs came from the sky, struck buildings and turned them into infernos within seconds. After half an hour, 400 houses were ablaze. In the garden the oaks, although they did not burn, were cooked and killed. The thick oak-leaf mulch over the seed beds burned and the ash was immediately carried off by the gale-force wind. The many pieces of thick timber that had been placed on the mulch to prevent it being blown away by ordinary winds were turned to charcoal. Also turned to charcoal were the wooden surrounds containing the beds. This took place towards the end of one of the hottest, driest Spring-Summer periods in Victoria's history. I really did fear for my seed, especially seeing that I always plant rather shallowly.

Came Spring. In the seed beds shoots appeared, a few here and a few there. As the weeks went on more shoots showed above the soil. They became hundreds then thousands. But there were some odd patterns in the beds. A certain toll had been taken. There were bare patches the shapes of the planks used to hold down the mulch. Along these patches the plastic labels that had been buried upright in the soil were charred for up to two inches of their length.

I suppose a word as to how the adult bulbs in the ground fared would not be out of place here. Some readers might be curious. They bloomed as if nothing had happened. They, and the seed, had gone through an ordeal that some scientists had likened to a minor atomic blast, to say nothing of the almost waterless autumn, winter and spring of the previous year, plus an intensely hot summer. Yet they flourished. I'm reminded of a line I read somewhere that roughly went: "The daffodil, in bravery it hath no equal."

It was suprising the number of people, locals, who when I ran into them, told me they had purposely driven past my place at one time or another since the fire to see if the daffodils had come up. Always they smiled when they told me of it and I could tell that the sight of daffodils re-emerging in now blackened surroundings meant more to them than just a glimpse of flowers growing in a paddock in no place in particular. Most were folk who had lost a great deal and who had emotionally suffered more than a slight blow. Not only had they lost their homes but their beloved gardens as well. In the sight of daffodils emblazoning a landscape so desolate as the one the locality had become, these people's spirits were given a lift they so very badly needed.

But not only at my place were daffodils to be seen. In many a burnt-out garden they were the only sign of life, often only a clump here and there, but what a sight for sore eyes they were.

This year I've received more requests for bulbs than in any other year.

THE MIDWEST DAFFODIL SEASON, 1984

GERARD KNEHANS, JR., Owensville, Missouri

What a long, cool, cloudy, damp, and dreary spring this turned out to be here in the Midwest. It was fantastic! This surely was the closest we are ever likely to see to the ideal daffodil weather enjoyed in the Pacific Northwest, England, and Ireland.

Most of our season was entirely free of those elements detrimental to daffodils which we commonly experience here. There were no late frosts, late snowstorms, severe thunderstorms, damaging winds, or hot weather from early March through April 20th. The daffodils responded with a perfection I've never seen here. The colors were more brilliant than ever. The smoothness was unexcelled. And the blooms seemed to last forever.

A thunderstorm with hail followed in a few days by 80-degree weather rushed the rest of the season along on an inferior note. Still, I had poeticus cultivars blooming into mid-May.

Througout the season, bloom count was phenomenal. Cultivars down for any period of time were smothered with blooms. This was due, I believe, to ideal growing conditions last season. It was a long, cool, and wet spring with daffodil foliage ripening about two to three weeks later than usual. This late growth added more hours of sunlight to the growing process.

There were many very nice yellow cultivars this spring. The best performer was Gold Phantom. While it was not the largest, its color, form, and poise were perfection. The smooth, slightly swept-back perianth and upward looking flowers offered a bold appearance indeed.

Other yellows which performed superbly were Arkle, Golden Sovereign, Golden Jewel, and Ormeau. Arkle was a massive, yet refined, beauty. Golden Sovereign consistently produces very smooth blooms. Not tall in stature nor displaying large blooms, Golden Jewel still vies with Gold Phantom for all around excellence.

Arctic Gold was not up to its usual standards this year. Inca Gold, though quite rough, displayed the most intense deep orange-gold color this season. All other yellows were pale by comparison. However, for best garden display of a more refined nature here in the Midwest, Modoc cannot be beaten. Prolific, consistently good, and early, its stems and flowers hold up even in the worst weather, including late freezes and snow.

This was the best season ever for white daffodils here. Even Cantatrice, usually a very pitiful creature, was transformed from an ugly duckling into a large, beautiful white swan.



WHEELER

By far the best white was Innisbeg, which displayed great pureness of color, extremely smooth medium-sized blooms, slightly reflexed perianth, and a nice upward poise.

Other very good whites were Churchman, Silent Valley, Broomhill, and April Love. Tutankhamen no doubt is the whitest of the whites, but it was "hooded" again this season. White Star has yet to prove itself here.

In bicolors, there was no overall all-star performer. Bobster was the smoothest with the best form and poise, but the contrast was not the cleanest. Jolly Roger displayed the cleanest contrast on smooth blooms, but the stalks were very short. A Bobster with the bright contrast of Jolly Roger would be a prize winner.

In "red" daffodils, Falstaff, Torridon, and Loch Hope led the pack. Torridon has never failed to produce superb blooms with the deepest red effect. There were a few nicks on the petals this year, but then this is the Midwest. Falstaff just lasts and lasts and has never faded. Neither has Torridon, but Loch Hope does fade. The sun's rays are too strong here, even in cool weather, for most reds.



The pinks were a mixed lot. In general, the ones that bloomed up to mid-April in the cool weather were intensely colored and those which bloomed later faded quickly. The absolute best was Roseate Tern, displaying deep color, exceptionally smooth and well formed petals, slightly reflexed perianth, and an upward lift in poise. The sun did burn the cup a bit when the hot weather settled in.

Other very nice pinks were Dailmanach, Kildavin, Fragrant Rose, and Arctic

Char. While nice, Dailmanach surely doesn't achieve its best here.

Reverse bicolors were much better than they have been the past two seasons. The revese effect was very strong this spring. The best cultivar was Moonspell, which is another one of those consistently good cultivars. The lemon yellow color of this cultivar is not as deep as many others, yet its form and smoothness make up for this. As an added bonus this season, Moonspell opened with a pink blush in the cup, which it held for about a week. The cup gradually changed to lemon and then to white.

Focal Point also is an excellent cultivar. It's so tall and bold in appearance and the reverse was most striking with a narrow yellow edge left around the corona. Sweet Prince is the smoothest of these, but it did not reverse well this year.

Among the short-cupped cultivars, I really was impressed by a gratis bulb sent with my order last year from Ballydorn. Labeled 73/3A/2, it was most striking, offering bright color and an extremely smooth, almost circular, perianth. Other excellent cultivars included Dr. Hugh, 3 W-GOO, a massive flower which held up well in the warm weather, and Lisbane, 3 W-GYR.

The doubles all opened very well this season, except for Santa Claus, Rose of May. poeticus Flore Pleno, and Unique. Unique has always been an excellent performer and I can't explain its failure to open properly this year. I obtained quite a number of double daffodils last year and can't say much in the way of experience about their performance here. Of those I've had for a number of years, Tahiti and Gay Song are the most dependable.

My favorities among the first-year bloomers were Delnashaugh, Gay Kybo, and

Gay Challenger.

Since cyclamineus hybrids are among my favorites, I'll restrain my comments quite a bit in this division. My favorite among these is Foundling, which is very dependable and stunning in a clump. Other favorites include Ibis and Jetfire, which are rampant increasers and very bright visitors early in the spring, and Bonus, Durango, Little Princess, Cotinga, and El Camino.

My first year down bulbs of Heidi produced miniature blooms, which were very close to those of the species. I hope these increase and perform well in future

years, as this cultivar is most charming.

One final comment. Obvallaris is a variety that is known to produce more leaves than flowers, but it has proven to be a most dependable bloomer here the

past three or four years.

That ends this article, which I hope will be of interest not only to daffodil enthusiasts in the Midwest but wherever daffodils grow. Daffodil growing in the Midwest can be trying, but it can be most rewarding when you select cultivars that perform well in our climate and plant them in protected sites to enhance the smoothness of blooms.

A GOOD ONE

This accompanying photograph shows Jet Fire 6 Y-R (Mitsch, '66) blooming in March, 1984, in my garden with 95+ blooms. A close check of my records shows that I purchased one bulb in 1977.

It was moved three times to virgin ground and can only be faulted with occasional large blooms. In some seasons, color in the cups may be a little

unstable.

No wonder Brian Duncan said it would be grown by the ton by th end of this century. I am glad I have room to grow it for years to come.

--Curtis Tolley, Elkview, West Virginia



FATHER A'S QUINN COLLECTION

A HIDDEN WORDS PUZZLE

PEGGY PATTERSON, Chestnut Hill, Massachusetts

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E	Н	P	D	В	1	G	J	0	Н	N	Q	U	В	1	E	K	Α
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Hidden words appear forward, backwards, up, down and on the diagonal.

Arctic Char Arish Mell Big John Cherry Bounce Coloratura Colorful Dailmanach Dividend

Fintona
Galahad
Golden Aura
Lapine
Masquerade
Montaval
New Penny
Olympic Gold

Panache Pipit Pitchroy Precedent Purbeck Rival Rockall Sun Ball

BEGINNER'S CORNER

FRANCES ARMSTRONG, Covington, Virginia

It's that time again, time to begin planting our daffodil bulbs. What a great pleasure it is to be in the garden on a crystal clear October day, blue skies above, brilliant color around us, while we carefully place each fat bulb in its bed for the

winter and dream of the beauty which will come with spring.

But first we must come down to earth and do a little hard work. Good friable, well-drained soil is the prime ingredient in growing daffodils successfully. Fine healthy bulbs are important, too; but all is lost if the soil is dense and compact, infertile, and poorly drained. Heave to, dig deeply (at least twelve to eighteen inches), add well rotted humus, sand or cinders if necessary, low nitrogen fertilizer, whatever is needed to give your precious bulbs the kind of home in which they will thrive. This preparation should be done several weeks before planting time and when finished the bed should remain slightly elevated to facilitate good drainage.

Once the soil is settled and the fertilizer watered in well, the fun begins. Some growers prefer opening a trench for the bulbs; others like to use a long handled bulb planter and plant one by one. Be sure to inspect each bulb carefully for signs of basal rot or of the narcissus bulb fly. If the bulb is soft or decayed and you decide to discard it, cut it open to see what the trouble is. Standard size bulbs are planted six to eight inches deep from base of bulb to top of ground; small ones, a few inches

more shallowly.

As you plant, chart each bulb carefully. Labels are fine but subject to destruction and disappearance. Memory is not to be trusted. The height of frustration is finding a beautiful bloom and not knowing its correct name.

To avoid leaving air pockets around the bulbs, water well after you complete

your plantings. Water will also stimulate root growth.

Established plantings may be fertilized in the fall with a mixture high in phosphate and potash, low in nitrogen. Mulches are useful over both new and old plantings for weed control, to prevent alternate freezing and thawing, and eventually to add humus to the soil.



TWENTY YEARS WITH MINIATURES

ALICE WRAY TAYLOR, Franklin, Tennessee

I never dreamed when I bought my first miniature daffodil in 1961 (triandrus albus) that I would ever get so tremendously interested in these little ones. Of course, I didn't keep this first one but I wasn't cured of trying, and in 1966 I bought Baby Moon, rupicola, and x tenuior. By that time I had started my dooryard garden at the farmhouse and managed to keep Baby Moon. Sometime during those years, I bought Elizabeth Lawrence's book, The Little Bulbs. In it I found the clue to successfully growing miniatures when I read of her success in growing them. on a bank with plenty of grit. It came to me that I had the perfect place if I could rescue the hillside back of the farmhouse from the blackberry and dewberry briars, sawbriars, poison oak, buck bushes, and honeysuckle. I managed to get a leaning (back) rock wall built in which I had planting pockets for many rock garden plants. Back of the wall I gradually cleaned out the debris, filling in with the same kind of soil where needed. In this particular location at the foot of the Highland Rim, the shore of the sea that once covered the Nashville Basin, the soil is sandy loam with sandstone pebbles of various sizes. The soil pH is 6-7 which is neutral to slightly acid. We moved to the farm in November, 1967, but the house was still under construction, mostly by my hands; so I had little time for gardening. In that year I bought Baby Moon again, Canaliculatus, single jonguilla, Little Gem, asturiensis, watieri, Lintie, juncifolius, and Hawera. I still had much to learn; so I lost all the species except the single jonguilla which bloomed very early. I know to give the species (most of them) the driest slopes that are protected from washing. I use the native rocks to hold back the soil by partially burying them tilted so that the water goes down into the soil behind them rather than over or around them. Small pockets thus created are good places for the more choice hybrids, particularly those that like protected places and don't multiply fast. You should always be careful that soil doesn't wash down and cover your bulbs too deeply. I had nice blooms on Flyaway for two years or more, then nothing but foliage until I lifted it and placed it more shallowly. Now it is fine. Mite and Kibitzer resent disturbance, but can be moved with care. I have found it better to lift entirely and replant those than to try and take bulbs off the side.

Some hybrids seem to be very delicate and difficult to keep. Mary Plumstead is one of these. I got it by mistake the first time as a mismarked bulb. It thrived in a dry slope for several years and multiplied. Then one year it didn't come up, and digging in that spot later produced one hard dry bulb that never came up even after careful planting. Other attempts with this cultivar have met with no more success. I think this delicate constitution holds good for many standards, too. Watieri has only been successful once. My best try with it was in 1973 when I got blooms the first and second years; then, when I was sick the next spring, a daughter unwittingly planted perennials on top of it and it was seen no more. I was fortunate enough to get one bulb in 1981 which seems now to be three, but so far no blooms. Needless to say, I stay carefully away from it in my digging.

If I were asked to recommend bulbs for beginners, I would say try such things as Tete-a-Tete, Little Gem, Little Beauty, Mustard Seed, Pango, single jonquilla Segovia, Bobbysoxer, Small Talk, Clare, etc. These multiply nicely, bloom well, and are fairly small in stature and are dainty enough to be more than acceptable as miniatures.

Many of the jonguil hybids are quite similar in appearance; and it is sometimes difficult to be sure you have what you have bought, especially if no one in your

region is growing these things. Pease-blossom, Sea Gift, Demure, Kidling, Curlylocks, Clare, Chit Chat, and Pixie's Sister are sufficiently distinctive to be easily identified. Descriptions of their foliage and height, etc., should always be included. Of the late-blooming jonguils, Skiffle and Green Ginger are guite similar in conformation, but the cup of Skiffle was considered a 7a (long cup) while Green Ginger as well as Rikki and Stafford would have been 7bs (short cups). Of the early blooming 7s, Sundial and Sun Disc have to be studied closely and I didn't know the difference between them until this year as I hadn't ever had the opportunity of seeing the real Sun Disc.

The most frustrating feeling is receiving a misnamed bulb. I got Yellow Xit and Minnow accidentally. In 1978, I bought Sentry from Broadleigh; and it was listed that year, 1979, and 1980 as a bicolor trumpet. That is what I received and it's delightful. Someone I know received jonguil labeled Sentry and last year (1983) it was listed as such in Broadleigh's sales sheet. One year I received something that didn't bloom for at least two years, but it has bloomed well since. It is very similar to Green Ginger with a small flat cup of light yellow, but this year it had a neat red edge to the cup. Of, course, colors were exceptionally good this year because of our cool spring. I rather think it must be one of Alec Gray's seedlings that were evidently sold to various English growers after his retirement. I remember that one year Jefferson-Brown offered some of them to the public.

James Wells, in this country, has made a fine effort at straightening out the identification of bulbs, especially species. In a swap last year I got rupicola from him and found it to have the same short gray foliage as the juncifolius I have received from various sources, but a truly different bloom. Now I would like to have the true juncifolius. I would also like to have a true triandrus concolor, since what is usually sold for that is really triandrus pulchellus. Again, I have two different henriquesii from the same source that have me baffled. One has long, thin green foliage and has never bloomed. The other has medium gray foliage and a very small butter-yellow bloom with rounded petals and a relatively deep round

cup.

Does anyone know the best way to get bulbocodiums to bloom year after year? Should they be lifted at regular intervals? Planted deeply or shallowly? I have good luck with b. tenuifolius on a dry slope, while b. nivalis planted at the foot of the wall where a wet-weather spring flows much of the winter and spring keeps growing and blooming plentifully. I should explain that I don't grow my bulbs in orderly beds, but that they are interspersed with small rock garden plants and small bulbs such as muscari, iris, tulips, etc. I don't lift my daffodils unless they need dividing or I think they would do better at another location. My one experience with keeping them out of the ground any length of time was bad. I am grateful to have gotten some bulbs to multiply to sufficient quantities to be able to plant them in drifts. This makes for a much better show in spring. Our miniatures don't make a big show like the standards. Lifting them accurately isn't always easy; so sometimes I lift them before the foliage dries. I put them back in the ground immediately, not pulling them apart. Water them in as you would any plant if it is warm and/or dry.

When you are lucky enough to have choice bulbs you are naturally fearful of touching them, but most of the time you can safely handle the hybrids with care. I bought Flomay in 1970, but waited until 1977 for a bloom. It had two to four blooms each year until 1983, blooming April 4th to 12th. I decided to take a chance on dividing it last fall, but there was only one large bulb and one very small one. Then this spring brought lots of foliage, and unexpectedly on April 14 there were eight

buds or blooms. What a surprise!

One more suggestion: whether you are a serious collector or not, keep buying and blooming records, and a chart of your planting as well as markers. As I now have more than 125 cultivars and varieties, I am extremely glad I have done so.

DEEPFREEZE IN COLUMBUS, OHIO - DECEMBER, 1983

GRACE P. BAIRD, Columbus, Ohio

have always theorized that Mother Nature has her own method of evening things up; but this time she went to extremes.

But let me begin with early summer of 1983. Normally each year I dig one third of my daffodil collection. But this year I decided to dig twice that amount because I was planning to go to Australia and New Zealand in September, 1984. Our summer was very hot and extremely dry. In August the temperature hovered near 100 degrees for a couple of weeks; we had had no rainfall since 4 July ;working the ground was a terrific chore; but somehow we muddled through. By mid-October I had finished my plantings and was beginning to hose down the beds when a beautiful soft rain started to fall. It was like a gift from Heaven; finally Mother Nature was cooperating. I do not mulch my beds until after the rainy season has passed and the garden has experienced a good killing frost. Usually by mid-November I can handle this chore when I bed down the rose garden for the winter. The roses were finished, but I could not finish up the mulching of the other beds because the rains continued to fall, and heavily. I kept thinking what a great start the daffodils were getting for super root growth.

December was also a rainly month and reasonably mild for a couple of weeks. Suddenly winter arrived. On the 19th it was bitter cold and the temperature started to drop very quickly. On the 20th the thermometer registered 23 degrees below zero and the wind chill factor was 55 degrees below zero. This was the Thursday before the Christmas weekend; I hurriedly finished up my grocery shopping and declared, "I am not going out again no matter what; it is too cold for man or beast." Our daughter literally blew in from Dayton that afternoon; we gathered up her belongings, tucked her car in the garage, and all three of us ran for

the indoors. It was so good to be in a warm house!

What had happened? We had six inches of frost which lasted for forty-eight hours and this extreme cold prevailed for better than a week; and because the ground was so moist and reasonably warm everything froze solid for that depth of six inches and remained so for all of January and the first two weeks of February. Unfortunately we had had no snow cover which would have given us its normal protective blanket. Then in February we had a sudden warming spell, and on the 12th a 70 degree temperature broke a one hundred year record. This mild spell flirted with us until the 27th when freezing rains and heavy snows blew in from the west and brought with it a sudden drop in temperatures to the low 20s and 30s. The winds were sharp and brought twelve inch snowdrifts; this cold spell remained with us until mid-March. Finally on the 17th I could see tips of green peeping through the snow. What a relief to see plantlife at last, But the worst was yet to come. The extremes in the weather conditions cost us dearly.

The deepfreeze was devastating! I lost approximately 325 standard daffodil cultivars; my miniature collection was a total loss; half the rose garden was wiped out and later I learned that was typical of all the rosarians in the Columbus area as well as the Whetstone Park of Roses. Although the roses had been given their normal protection the extreme cold split the canes down to the graft; the broadleaf evergreens were badly damaged; hardy groundcovers were a total loss; the iris reticulata disappeared; and believe it or not even the muscari were frozen. Other bulbs such as the snowdrops, winter aconite, and the hyacinths and tulips came

through in glorious color. Thank goodness!

How do I evaluate the daffodil losses? It seems the early blooming cultivars were hit the hardest, I lost all the 6s; many of the 7s which were planted next to an eastern wall of the garage which is also bordered by a cement walk which leads to the back garden; all the 8s which are normally tender; the early trumpets and 11s; all of the 5s which apparently are not so sturdy; and finally many of the 2 Y-Ys and 2 Y-Rs which are fairly early to bloom. Many of the cultivars threw up foliage which looked a bit anemic and many of these had weirder damaged blooms; these I have tried to restore to some sense of normal growth by spraying with fertilizer. At this point I'll try anything. We have always thought colors, such as whites, pinks, and reverse bicolors, were more susceptible to losses; in my experience the colors were meaningless. In fact the reverse bicolors which are usually early to bloom suffered no losses except for Pastorale and Rushlight. So it seems anything which broke winter dormacy in the mild weather of mid-February suffered damage.

Our CODS members had various reports of winter damage. In many cases they lost entire beds of newly planted daffodils. Other reported losses only where the beds were lightly mulched or not mulched at all, such as in a rockery. The daffodils at Whetstone Park suffered losses in all the beds, especially the newly planted areas. Only the Division 3 and 9 seemed to have come through unscathed. A new daffodil bed at Inniswood was also a disaster. And everywhere I go this season I am asked the same question, "How did your daffodils come through the winter?" and the individuals will offer, "I lost half of mine" or, "All of my miniatures disappeared" or, "Some never came up but others bloomed beautifully." So never again will I tell anyone that daffodils will not freeze. They did in the winter of 1983-84!!!

But one of our CODS members replanted a very large area last summer during the extreme heat. She learned that moving daffodils in hot weather really did no damage; the real problem is in how the soil is prepared. She raised her beds, used much sand and well rotted compost in the mixture of soil, hilled up the daffodils, and mulched heavily with grass clippings late in the fall. Where she used this method, her daffodils survived the winter beautifully. On the other hand her well established beds, regardless of exposure to the wintry winds and cold, were devastated.

What have I learned? First, that daffodils will freeze. Raised beds are an extra protection, provided they are heavily mulched. The mulch may be extra compost, leaves, or grass clippings provided these are partially removed when the leaves begin to poke through. Second, that planting deeper is helpful, if good drainage is provided. I used to plant my daffodils ten to twelve inches deep; in more recent years I have planted them with only about six inches of soil above them. They grew much better in deeper plantings, and in the future that will be my rule. Third, that a protection from the cold wintry winds is necessary if Mother Nature does not provide a snow cover.

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TAZETTA TALK

WILLIAM R. P. WELCH, Carmel Valley, California

Recently, I have been devoting much more attention to acquiring wild forms of N. tazetta. For years I have grown the bicolored form collected on the Greek island of Delos by Bill Bender. These make quite robust bulbs and top growth and have shown no special soil requirements, in spite of the poor soil of their natural habitat. There are several clones, which are identical in color (white with orangeyellow cups), but they vary in bloom season over several weeks. Ordinarily their season is December, but if put in a location where the soil cools early enough and there is sufficient moisture, they will begin flowering in the second half of September. In fact, I call my best clone "Sept. 20 type." It differs in being more rounded in shape, in sharp contrast to many of the others with their long pointed petals and lobed cups, and having the margin of the cup entire. On mature bulbs, florets are borne in clusters of eight to fourteen. I once had one that was far sturdier than the others, flowering last, and it had sixteen florets on the main stem. After that, it disappeared altogether. Generally, the good ones have fairly rounded perianths of about one inch across and a quarter inch cup. The starrier ones are about one and one quarter inch across and are generally borne in smaller clusters than the rounded ones. In sunny locations, stems are about eight inches tall when in full bloom. The clones are self-sterile, but set seed freely if intercrossed or crossed with other tazettas. The pollen will also cross readily onto other forms. I have a large series of seedlings from intercrossing the best ones, and have found that there is much variation in the bulbs, which are now three years old. Many are dividing excessively, while fortunately some have not and among these are several that have grown considerably larger than the others. These will be saved for planting out, but the majority clearly aren't worth saving.

Of identical color, but somewhat different form, is the wild type sent by Dr. Shejbal in Rome. I have only had these for one year, but so far they seem to be fairly similar to the Delos in terms of size and vigor and ease of culture. So far, their season is definitely later, coinciding with Gloriosus, to which they also show an affinity in the size of the cups, which are quite large in relation to the one-inch florets. The size of the cups is accentuated by the rather strong reflex of the perianth segments, which are rounded in all individuals. Up to 3/8" in length and width, the outsize cups lack the solid orange of Gloriosus, but otherwise it seems guite possible that I have here the wild ancestor of it. Another difference from the Delos type was in the relatively few florets in the head, only eight to ten even in the strongest individuals. Maybe they simply had a cool summer over there! This contrasts with the up to eighteen to twenty-two florets on Gloriosus, but I must say that their eight-inch stems compared well with the six-inch (but thick and sturdy) stems on Gloriosus. These heights are only of importance as a comparison between varieties, as these were growing in a dry location and during a dry season. Surprisingly, this wild form did not give a good seed set, even though I used the potent pollen of Gloriosus on them, but their pollen did cross readily onto others such as Avalanche.

This year I have received bulbs collected on north-facing limestone cliffs in the vicinity of Mt. Carmel, Israel. These were growing in sticky brown clay in tight clumps of six to eight bulbs, not all of which were of flowering size. Such division was surprising, but when I found a couple of empty shells with the tell-tale signs of bulb fly attack in the past, I realized that this was related. Either the fly was causing the fast division, or the fast dividing bulbs, being softer, were more attractive to the fly than harder, slower multiplying bulbs in other locations. My experience has

been that fly is both a cause and a result of fast splitting. Since bulbs from both locations were in clumps of many, it seems likely this type may be somewhat like the notorious Canaliculatus. I hope not! I know the coloration of these will be of the same bicolored type as the others, but I don't know too much else about them. The soil they were growing in had a pH of 7.2, less alkaline than I had expected, very low in potash and phosphate, but fairly high in nitrogen and organic material. This is interesting when one compares it with what one ordinarily considers to be the growing conditions best suited to members of the genus Narcissus.

From Dr. Javier Fernandez Casas in Madrid have come quantities of N. x dubius, N. panizzianus, and N. tortifolius. The last was named by this gentleman, who describes it as being white like the others, and like them, being found on limestone cliffs, a decidedly hot, dry, poor location. N. tortifolius bulbs were collected from four locations in the vicinity of Almeria, east of Malaga, where the N. panizzianus came from N. × dubius bulbs were from Murcia, a more southeasterly location than I would have expected from this one. Now I must see if he can find me any yellows or bicolors. I once grew some N. panizzianus from another location in Andalusia, and these were not of much use, as they were but a smaller, poorer form of Paperwhite, but not of small enough stature to be at home among miniatures. It grew well in ordinary soil, which here is on the heavy side. I once grew some that were labelled as N. canariensis, but their similarity to Paperwhites suggests that they were mis-identified.

From Madeira I hope to be getting some that are supposedly wild Autumn Sol. but until I see them I will leave this as mere conjecture, although the distinctiveness of Autumn Sol suggests that it is indeed from a long-isolated locality. A friend in Jersey told me that his seasonal workers from Madeira recognized his Autumn Sol and now we hope to get some to see for sure.

I am well aware of Matthew Zandbergen's statement in his article, "The Windmill and the Daffodil," in the 1969 RHS Daffodil and Tulip Yearbook, to the effect that he had received tazettas collected from the wild in a remote mountainous part of Brazil, where they grew with layers of wool on the bulbs, as protection from frost, much as is true with some Asiatic tulips. After flowering on extra tall stems for several years, he lost them in an unusually severe winter. That was twenty years ago, and goodness knows how much longer they will remain undiscovered. With contact lost with the missionary who found them, there is apparently no way to know even approximately where they came from, but regardless of what is said about Narcissus being only an old world genus I think readers will unanimously agree that Matthew knows a Narcissus when he sees one!

Do we have any members who are experts on native South American bulbs? And if so, what is their opinion on the above, and for that matter, on Dr. Shejbal's article in the June Journal dealing with bulbs of the Chilean desert? Have the bulbous plants of South America been thoroughly studied? As I understand it, there are parts of that continent which are unexplored, so how can we say that Narcissus do not occur there?







LETTERS

Kanagawa, Japan

Dear Mrs. Gripshover,

I am a member of the ADS for years. I have been buying new daffodils from Messrs. Mitsch, Evans, Lea, Carncairn, Abel Smith, Phillips, and Jackson to share with many of my daffodil lovers. The general status of Japan for daffodils has been much behind you. The average gardener grows Mount Hood, Fortune, and a few others only because newer ones are not available yet. My friend, Mr. Y. Uesumi, may be perhaps the best hybridizer in our country and I know him well. A couple of years ago he showed me a film of a 3 W-G (!) which had an entirely green cup with white perianth and he was proud of producing it. But as far as pink or dusky-pink is concerned, I have never heard that he produced a good one. I hybridize imported newest daffodils to distribute the seed and bulbils to anyone who wants them. I have been doing this for over ten years. Thus I think I know a good many daffodil people covering our country, and I think perhaps I am in a position to catch the news if any shocking event occurs such as "brown pink Fujiyama Dusk" which I have never heard of. . . .

Perhaps there may be a hidden hybridizer in some hidden place I do not know.

If he comes out, I will report to you again.

... .I am glad interest in the daffodil has been increasing steadily. I hope in the future someone in our country will raise some very new daffodil like "Fujiyama Dusk!"

Sincerely, Shuichi Hirao

Gloucester, Virginia

Dear "Beginner's Corner,"

I wonder if someone out there will be good enough to answer the following idle question for me: Why don't open pollinated seeds occasionally sprout, grow,

mature, and bloom on the spot where they fall?

For about thirty years, I have been producing commercial cut daffodil blooms here in Tidewater, Virginia. During that period, I have observed all levels of cultivation on hundreds of acres of commercial plantings, where millions of open/self pollinated seeds fall to the ground annually. To the best of my knowledge, I have never seen a daffodil grow from seed in any of those plantings. Now, it is no major problem to collect and propagate those same seeds in a little wooden frame in my back yard. Why, then, wouldn't some (just by pure chance) fall into a "sprouting environment" out there in the row in the field? And why wouldn't thirty year old plantings of King Alfred, The First, Carlton, Emperor, Mt. Hood, Fortune, Helios, etc., be peppered with all sorts of odd-ball daffodils?

To be fair, I have often seen old plantings dotted with occasional clumps of biflorus and a small white narcissus type with a yellow cup. But these occur with equal frequency in KA patches as well as Emperor, "Trumpet Major," The First and the others. Surely, these two varieties cannot be the common ancester of every commercial cultivar grown here. Personally, I have always ascribed those contaminations to "rogues" received with the stock—or to replanting in a carelessly rogued field.

Well, that's my trifling question; if you can find someone to tackle it, I'd be

obliged.

Thanks, Granville Hall

Chambersburg, Pennsylvania

Dear Mr. Hall,

Your "Dear Beginners Corner" letter of 23 April 84 was referred to me, and since I don't know to whom it should be referred I will tackle it.

At the Hybridizers breakfast at the 1983 Williamsburg ADS convention, we talked about daffodil seed germination or failure to germinate. Many factors that contribute to poor germination were mentioned, but all seemed to relate to a hostile environment such as drought, freezing, late planting, etc. I questioned if any in the group of 35-40 growers present had experienced evidence of allelopathy or autotoxicity in the germination of daffodil seed—there were none reported.

I have not searched the literature specifically on daffodil seed germination. As an old physician-farmer I maintain a membership in the American Society of Agronomy just to receive their monthly Crops & Soils publication. In the past several years there have been several reports of research projects on "allelopathy" and "autotoxicity" affecting seed germination. Some growing plants produce an enzyme in the soil which inhibits the germination of seeds of a different species—this is "allelopathy." Classic example is crownvetch used in roadside plantings for erosion control. Black walnut trees have long been known to interfere with growth of other crops; likewise Canada thistle and quack grass.

Other plants produce an enzyme or toxin which inhibits the germination of their own seeds. Alfalfa is one of these that show "autotoxicity." Pennsylvania State Extension Service found that it is impossible to renew an old field of alfalfa by no-till seeding of alfalfa seed into a growing poor stand of alfalfa because the seed doesn't germinate. If the field is sprayed with Roundup late summer and the alfalfa is dead over the winter it is possible to establish a good stand if it is no-till seeded the following spring. It takes 4-6 months for the "toxicity" to disappear. I would bet that if you sprayed a patch of old daffodils after flowers are cut that Roundup would kill the daffodils and everything else but the next spring there would be enough dormant daffodil seed germinate to prove autotoxicity in daffodils.

After our discussion at Williamsburg I decided to test in a small simple trial whether there might be some autotoxicity in growing daffodils. In a 4' x 4' bed adjacent to growing daffodils at one side I planted POPS (Phillips Open Pollinated Seeds) in 100 seed rows, 4" apart, interspersed with the last few lots of handcrossed seed. Earlier findings were verified today with the following results:

One hundred POPS in a row 44" from growing daffodil row planted 4" deep 4 Sept. 83 is now showing 52 seedlings, 100 POPS in a row 40" from growing daffodil row planted $1\frac{1}{2}$ " deep 4 Sept. 83 is now showing 49 seedlings, 100 POPS in a row 20" from growing daffodils row planted 2" deep 4 Sept. 83 is now showing 53 seedlings.

Obviously there is no significant difference in those seedlots, but 100 POPS in a row 16" from growing daffodil row planted 2 October 83 showed only nine seedlings. These probably were planted too late. One hundred POPS in a row were planted between the first two rows of growing daffodils (8" apart so that seed row was only 4" from each row of growing daffodils). THERE ARE NO SEEDLINGS THIS YEAR. This row was planted 2" deep on 4 Sept. 83.

In POPS seed which has been dormant for more than six months before plantings, I have usually gotten 50 to 70% germination the first year with an additional 3-5% germinating the second and third years and occasionally some fourth year germination. Using similar seedlots in my small test and from the results reported above I would postulate that growing daffodils do produce some enzyme in the soil that maintains dormancy in daffodil seed. I do not think the autotoxicity factor is persistent because last year I planted about 15,000 handcrossed daffodil seeds about half of which were planted about late June in fallow soil and the second half planting was delayed until 4 July after four-year seedlings had been lifted from that plot. This spring I could not see any difference in germination so evidently any enzyme produced by the previously growing fouryear seedlings had degraded before germination this spring.

In further discussion of what you have called "my trifling question," I would ask another question: "Why should nature work out such a system?" It is an accepted fact that hybrid daffodils are essentially self sterile. Dr. Craig at Penn State says that while the pistil is subject to inundation by pollen from the flower's own anthers, the flower protects itself from self fertilized seed production by formation of an enzyme in the pistil which rejects its own pollen. (The way to "self" a daffodil cultivar is to use mature pollen from an early flower of that cultivar and break open an opening bud of the same cultivar and pollinate the pistil before the self-sterility enzyme has developed.) Nature has determined that too much overcrowding by endless seed production would be detrimental to the established clone.

Carrying this reasoning a step further, any open pollinated seed falling around the base of the seed parent would also choke out the original clone; so there is an autotoxicity enzyme which causes dormancy in the seed falling to the ground around the base of the seed parent. However, if the seedpod bearing stem "goes down" it will extend the seed when it dehisces from the pod possibly 20" to 30" from the base of the seed parent. If there are no actively growing daffodils in the area those seeds do not encounter the autotoxicity hormone and will germinate.

You have been producing commercial cut flowers for thirty years and as outlined in your letter you have made an astute observation of a natural phenomena. I doubt that Nature has worked out an autotoxicity enzyme just to prevent rogues from messing up Granville Hall's named variety cut flower business, but your letter has furnished persuasive evidence that such an enzyme must exist.

I would think the autotoxicity enzyme would prevent germination of seeds in a row of cultivated daffodils. Any mechanical cultivation between rows would probably destroy any one-year seedlings as they germinate so none get to blooming size.

Thank you for your very thought provoking question. Sincerely yours, W.A. Bender, M.D.

BOARD MEMBERS ARE REMINDED TO SUBMIT THEIR BUDGET REQUESTS TO DR. SNAZELLE P.Y DECEMBER 1.

* * * * *

HERE AND THERE

Libbe Capen writes, "My return found George Schenk's *The Complete Shade Garden* (Houghton, Mifflin) here. . . . His book is for every landscaper, because as soon as you plant a tree for height, beauty, or privacy, you have a 'shade problem' and there is something in it for you . . . Your landscaping members will like this."

From Northern Ireland comes the sad news that William Toal died in mid-July. Mr. Toal was one of the founders of the Northern Ireland Daffodil Group, and was its chairman in 1979 during the world convention. He had been a keen exhibitor and was an astute judge with a good eye for the flowers. Illness in later years slowed him down, but it was a pleasure to judge with him and later to discuss the merits of the various flowers. He will be missed.



CONGRATULATIONS to Murray and Estella Evans who will be celebrating their fiftieth wedding anniversary on September 29 at Daffodil Hill where they will be joined by family and friends. May you enjoy many more happy years together.

GROWING DAFFODILS IN ARKANSAS

(from the Daffodil Society of Minnesota 1982 Yearbook)

Arkansas is a beautiful state in which to grow daffodils. It is unique in that it has three growing zones crossing the state, with the southern zone experiencing daffodil bloom ten days before the middle zone where Hot Springs is located, and the northern one-third of the state will have bloom ten days later than the central zone. This is really good, for it allows us to be able to depend on blooms for our show, whatever the date might be.

I have been growing many daffodils since 1942. In 1944, we purchased eleven acres of ground on one of the big lakes, and since 1948, the daffodil world adopted me. I began with a few hundred bulbs on a hillside, until I had a dream that about six acres of our woodland, then overrun with saw briars to the tops of the trees, would look much better with daffodils blowing in the breeze. My goal was to clear, plant, and enjoy many different varieties, for my friends didn't know that more than three or four varieties existed.

Giving myself a goal of six years, I settled down to order and plant. In four years I had over three thousand varieties and many thousand blooms. I was fortunate to find growers in England, Holland, and America who would sell me twenty-five of each variety and as many as I wanted.

Over the years, I have added many new ones each year, have lost many of the older ones, and still have many that I'm sure no one else has. Unfortunately, the digging, dividing, new beds, losses and additions, have made it impossible for me to guarantee the correct names of some of the older ones, but the general public, the hospitals, churches, nursing homes, and friends get to enjoy the blooms every spring.

With five grandchildren now having homes on the eleven acres, the beds have become fewer and fewer each year, but the great-grandchildren have increased and the recipients of the biggest bouquets each day in season are the school teachers.

-LAURA LEE COX, Hot Springs, Arkansas

HOPE FOR VIRUS-INFECTED PLANTS?

An article in the April 13 issue of the Wall Street Journal by Jerry E. Bishop told of new developments in antiviral chemicals which may prove useful on plants. Titled "Research on Interferon Yields a Penicillin for Plant Viruses," it states that "the new antiviral chemical is one of those unexpected offshoots of basic research."

Mr. Bishop says that a group of substances dubbed 2,5As, short for 2-prime, 5-prime oligoadenylates, momentarily jam the cell's protein-making machinery. A cell, however, can't afford to have its protein machinery jammed too long, so once 2,5A does its antiviral work, the cell quickly destroys the substance. Problems of toxicity and instability remained, however.

Biochemists at Temple University Medical School in Philadelphia succeeded in making a synthetic 2,5A that was stable and nontoxic. Several months later, scientists at Hebrew University in Israel applied some 2,5A from animal cells to fragments of tobacco leaves infected with tobacco mosaic virus. The animal 2,5A stopped the infection. The Israeli and Temple scientists, working with two West German scientists, reported that they have carried their experiments further. The synthetic 2,5A, they say, wipes out tobacco mosaic virus infections in a tobacco plant—without harming the plant. A tiny amount spread on tobacco leaves will eliminate the infection in less than an hour.

OBSERVATIONS ON WHITE, CREAM, AND MORROCCAN FORMS OF N. bulbocodium and

N. cantabricus

JAMES S. WELLS, Red Bank, New Jersey
Photos by the Author

If the yellow bulbocodiums seemed confused, the white and cream forms seem even worse to me; for there are two geographic areas to be considered as well as some hybrids. We also have to bear in mind the edicts of the botanists. The recent issue of the *Flora Europaea* clears the air to a substantial degree, but of course leaves unresolved what to do with and what to call the many forms of a species already being grown.

They recognize only one white flowered species in Europe, which is known as *N. cantabricus*. It belongs in the section BULBOCODII DC but is simply known as cantabricus. It appears to include all the variations previously named such as monophyllus, foliosus, clusii and so on.

If we now move across the Straits of Gibraltar to Morrocco, a somewhat similar bulb becomes *N. b. romieuxii* when it is pale yellow, or cream, while the white forms are known as *N. b. romieuxii* albidus. Unfortunately, this neat packaging does not conform at all to many bulbs being grown under different names; so, for the time being and in the interests of clear communication, some of these names must still be used. Let us now consider some of the forms of both of these species.

N. cantabricus. This used to be called N. cantabricus monophyllus and is supposed to be the species type. However, although Gray and others extol the virtues of its "glistening white" flowers, the bulbs which I have seem to be rather poor. The foliage is thin and tends to be prostrate and sparse. The flowers are clear white, of typical bulbocodium form with a good round cup, and are produced on rather tall stems, six to seven inches high. which tend to become somewhat lax, like the foliage. The net result is a rather untidy "rag tag" of a bulb. The name

monophyllus may apply when it is growing in the wild at high elevations and under high light intensity, but in cultivation most bulbs produce three or four thin leaves which just straggle over the pan. It is not one of my favorites.

N. cantabricus foliosus. Again, great confusion, I have bulbs from three sources, all different. But within the group are some that are excellent bulbs which are a delight to grow. It would seem to me that this is the bulb which should in fact be considered the basic type for cantabricus. From all that I have, two have been selected. Both are excellent growers, vigorous, disease free, with fine tufts of erect but thin foliage, producing multiple flowers from each bulb. Both flower early, towards the end of November and into December when grown in pans in a cool, 40°F, house. The first is a clear pure white, with large flowers having a wide open corona on quite short stems. The stems are not more than three to four inches long when the flowers first open, but they stretch as the flowers mature. Quite often a second set of flowers is produced after the first lot is over. I have one or two flowers on this pan as I write in early February. The second bulb I purchased as N. cantabricus clusii which is no longer a valid name. However clusii is written up in various publications as coming from the south of France and flowering late. The bulb I have conforms to none of these published descriptions. It is an early bloomer—November/December—and is extremely vigorous. Strong foliage is produced by each bulb, which tends to become lax as it grows older. However, each bulb may produce multiple stems, each topped with a fine, large, widecupped flower of crisp, clear white. It is almost an exact white counterpart of N. bulbocodium conspicuus. Again, it is an excellent grower, appears to be relatively free of disease problems, and performs regularly and well.

Just to add to the confusion, this last fall I obtained another lot of bulbs from England under the name "clusii" which is also excellent, but quite different, performing more closely to published details than the first. On this bulb the leaves are rather thin, but many, and held stiffly upright, as are the flower stems. The leaves ultimately become five to six inches long and the flower stems are perhaps three to four inches, each topped with a wide open, round cup of glistening white. Many of the flowers are held vertically, which might suggest that this could be the



N. cantabricus clusii, now believed to be N. c. foliosus.

form tananicus but it is not the same as any illustrations of tananicus shown in old issues of the RHS Yearbooks. The anthers are bright yellow, and clearly each bulb produces more than one flower. Twenty bulbs purchased last fall were planted in an eight-inch pan, and when in flower the whole of the pan was filled with blossoms. It was in full bloom on February 22, and had been in bloom for two weeks. It is a first class bulb.



N. c. clusii, tile barn form

These three I believe to be selected forms of N. cantabricus foliosus, but what do we call them? A, B, and C? How dull!

N. cantabricus petunioides. I am not sure that this should be classed as a cantabricus because in all its characteristics it is much closer to N.b. romieuxii than any other. Its origin is obscure also, because it was first noticed as a single bulb by Douglas Blanchard, John Blanchard's father, in a batch of bulbs which he had purchased from Van Tubergen under the name of cantabricus. It has thus always been considered a form of cantabricus. The foliage on N.c. petunioides is not too strong, being rather fine and rather prostrate, but the flowers are of course superb. Coming into bloom in early February, the pan is a sight to behold. Each flower is approximately one-and-three-quarter inches across, of a glistening white, with the corona spread out quite flat. The flower does indeed look rather like a petunia, hence the name; but the quality of the flowers, the crisp, clear white and the frilled edge to the flat corona all add up to a bulb of high grace and quality.

Very close to it is another form of cantabricus given to me by John Blanchard. It is supposed to have flowers slightly smaller than petunioides, but seeing it in flower now as I write, the difference is extremely small. Perhaps it is slightly smaller, but the form is almost identical to petunioides, and the flower is again of such a crisp sparkling white as to be almost startling. It is an excellent form.

We must now move over to Africa and consider N.b. romieuxii.

The basic form—the type—of N.b.romieuxii is a pale lemon yellow, fading perhaps as the flowers grow older to a paler color, deep cream, and sometimes

almost to an off white. The foliage is thin, yet produced in abundance, and the flowers appear in late December and January on short stems, three to four inches long. The flowers are always widely flaring with a wavy edge, on the order of petunioides, but not quite so flat and reflexed. The corona, while being widely spread, still retains a cup shape. The flower substance is good, and the bulbs, once established in a pan, are amazingly floriferous. It is an excellent bulb.

Quite a number of selections of different forms have been made in the wild, many with individual qualities which make them outstanding. One I received from John Blanchard is similar to the basic type but has extremely crenulated and frilled edges to the corona. Then there are three forms collected by Jim Archibald all of which are well worth growing. The first is a bulb flowering pale cream, and remaining that color while in flower. It is an extremely vigorous grower, producing strong tufts of fine foliage from each bulb, followed by several flowers on short three to four inch stems. Each flower is a wide open cup with slightly frilled edges and of good substance. From the same area in Morocco, Jim Archibald made two further selections. The second is essentially the same as the first, except that the flowers are almost a buttercup yellow. The color is stronger than a deep cream, yet is not so bright as, say, N. bulbocodium conspicuus. Flowers are large, with wide coronas, and the effect is first class. The third selection, made from the same source in the wild was one bulb, a slightly paler yellow, with large flowers reflexed in a similar manner as petunioides. The flowers are as large and the corona is spread quite flat to produce the "petunia" effect. Jim Archibald named this selection Julia Jane, and as it has presumably been propagated from the one wild bulb it has to be a clone. It is most attractive, but the flowers do not have quite the substance of petunioides, and therefore tend to wilt slightly when fully open at midday. They come back in the evening, but they do not have quite the sturdy form of the others. However it is a very beautiful bulb and well worth growing.



Julia Jane

I have bulbs of an alleged spring flowering form of romieuxii, but see no value in them, but another labelled "good form" is just that. N.b. romieuxii mesatlanticus appears to be just another selection, made in the wild from romieuxii. It is a pleasant bulb, a good grower, and free from disease. Slightly taller in stem than the

type, the flowers are a clear light yellow, but good. The flowers are not as large as the romieuxii type, and it is supposed to flower much later. With me it flowers at the same time. N.b. romieuxii rifanus is again very similar to the type, and I believe it has achieved its name solely because the bulbs were collected from the Riff mountains. It does flower early, late November or early December. The corona is longer and not so expanded, in fact almost goblet shaped.

I have had five different lots of N. cantabricus tananicus, and only one appears to be true. This came from John Blanchard. The flower is quite small compared with the forms of romieuxii, clear white on short stems not more than three inches tall, appearing in early February. It is reputed to hold its flowers vertically. This is true for some flowers but not for all. The cantabricus variety E.G. Raynes appears

to be exactly the same as the tananicus which I have.

N.b. romieuxii albidus, at least the bulbs which I have, are not truly white as the name might suggest. Some years ago I obtained a bulb from Brent Heath which, when in bloom, agreed with published descriptions. The foliage is extremely sparse, only one or two leaves, rather thin and prostrate. (Here is a bulb which might justify the name monophyllus.) But the flower, when it appears in early January, is a most elegant bloom. The corona is long and fairly large, in fact a well defined trumpet, clear light yellow, with green stripes down the outside. It is quite an exceptional flower and I can hardly wait to develop a full pan. But it's going to take a long time, for the bulb is very slow to increase.

Two other forms of romieuxii albidus, collected by Jim Archibald under number, have not yet flowered, but another which I also obtained from John Blanchard did for the first time this year. It has the rather formidable name of N.b. romieuxii albidus zaianicus lutescens and has been variously described as "white to greenish yellow" and "pale self yellow." My flower was a light clear yellow, with again a fairly pronounced corona, although not so long or large as the albidus form already mentioned. They are clearly two different bulbs, both most pleasing. I am wondering, however, if the term "albidus" should be correctly applied to these bulbs.

We now come to the hybrids, most of which have been produced by Douglas Blanchard, John Blanchard's father. These originated from a cross between a good form of *N.b. romieuxii* and *N. cantabricus foliosus*. The result was a group of bulbs, all with some considerable degree of hybrid vigor, with in general quite large flowers of a pale cream fading to white. The first lot were named after types of cloth, i.e. Nylon, Poplin, Muslin, and Taffeta. Of these I have only been able to obtain Nylon and Taffeta, but my four lots of Nylon are all slightly different so I am not yet certain which is the correct bulb. A second generation of seedlings was also produced, and I have two of these, Tarlatan and Tiffany. Both are first class. Tarlatan has a fine large white flower with a wide open cup; but by far the best is Tiffany, which I obtained from John Blanchard. It flowers rather early—December/January—and has a vigorous tuft of healthy foliage, from the center of which can arise two, three, and even four strong stems four to five inches high, each topped with a large flower of deep cream. Two pans in full bloom were a delight at Christmastime.

As I remarked at the end of my article on yellow forms of bulbocodium, there is here a wide difference between strains, forms, and, quite often, sources of ostensibly the same bulb. A fine example is N. Jessamy, another of the Blanchard hybrids which I forgot to mention earlier. As always I obtained stocks of this from as many places as possible, and have four pots, all supposedly the same. One pot, being a bulb which I received from a friend, is clearly superior in every way, although, looking at them all in flower, one can see the general similarity. It is therefore, this superior form which I shall continue to grow, and use the others to plant in the garden, where they will almost certainly disappear in time.

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(September 1983 - June 1984)

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SPREADING THE IMAGE

PETER FENN, Surrey, England

For the spring of 1984, as part of the Daffodil Society [Britain] efforts to spread the image of show daffodils and narcissus, I undertook to organize an exhibition of cut blooms in a variety of different settings. This was done to make a change from the usual competitive scene.

I was able to "acquire" a local hall (Farnham in Surrey) for a few days, and decided to put on the show for two evenings, plus the afternoon of the second day. Dates set were April 24th and 25th. Tongue in cheek, I advertised it as having 1000 blooms from 150 cultivars.

Fortunately, I had six months to plan and organize it, and, as the time drew near, some willing hands to help stage it.

The bulk of the blooms were to come from my own beds and those of a local friend, Ian Wood. The remaining blooms were very generously supplied by the specialist trade who really "done us proud" and it looked quite impressive with the various traders side by side on the tiered staging. Unfortunately, due to the difficult season and the problems of keeping blooms some were lost, but nevertheless it proved that some eight worldwide known names can have their flowers collected and shown together.

About 50% of the blooms were staged in ones, threes, and fives, as for competition on tiered staging. The remainder were "arranged" more informally in a variety of containers and settings under the headings of "Eastern Promise," "Green and Gold," "Crystal Clear," and "Spring Garden." There were also about thirty pots of growing flowers, seedlings, a feature on judging and a table of information, catalogues, etc.

In all we managed to put up some 1350 cut blooms from 200 cultivars, and every vase was labeled.

Some 700 people came to view the exhibition and their comments and praise for such a venture were very rewarding. Even more encouraging was the serious interest being shown; and the continuous questioning on all aspects of growing, showing, and breeding kept both Ian and me busy all the time.

Surely this must promise well for the future; only time will tell. This response certainly made all the worry and hard work worthwhile and proved a very successful and satisfying exercise.

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Articles and photographs (glossy finish) on daffodil culture and related subjects are invited from members of the Society. Manuscripts should be typewritten double-spaced, and all material should be addressed to the Editor.

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THE COVER DRAWING

of Magician 2 W-P, bred by Grant Mitsch and registered in 1979, is beautifully depicted by Gene Bauer, Running Springs, California.

THE ENGLISH SEASON, 1984

GEORGE TARRY, Cheshire, England
Photos by the Author

Not a vintage year, for most growers a late start and then a period so crowded with flowers and activity that it was impossible to appreciate either to the full. Winter was kind without a noticeable cold spell and growth was well advanced by early March. The sun then disappeared; and cold, dull, cloudy weather resulted in minimal growth. Our first major event, the RHS Competition in London, was held unfortunately a week earlier than usual on 20 March and was the poorest for many years. Very few single bloom classes attracted more than three entries, quite a number did not even reach that level, and "competition" was sadly lacking. The significant feature was the emergence of Ron Scamp, from Falmouth in the extreme southeast, as a major exhibitor at this level; and he surpassed the successes of regular winners Bob Southon and Mrs. Hylda Oxton to take the medal for most points. He also staged Best Bloom, Strines; and best double, Tamar Fire; while Jack Gilbert had best trumpet, Newcastle; and Bob Southon best short-cupped, Verona, Jack Gilbert also retained the Devonshire Trophy for a collection of twelve blooms without any opposition. Not one bloom appeared in the classes for seedlings and the overall impression was a lack of understanding of the process involved in the production of high quality blooms at an early date.



Left, Strines, Best in Show; and right, Tamar Fire, Best Div. 4 at the RHS Competition.

The main RHS Show was held on a more traditional date, April 17, but while the weather had shown a little improvement by this time, several leading growers reported that flowers were still scarce and they were unable to bring their usual quota. This had an adverse effect on the major collection classes, but the single blooms were very close to the level attained in recent years.

As ever, the Engleheart Cup was the focus of attention and competition was closer than for some years. It was won once again by John Lea with a collection containing six names — the now familiar Achduart and Gold Convention; two Y-Rs, Loch Carron and Loch Hope; Silver Convention 1 W-W; and Pol Voulin 2 W-P, a new release which was Reserve Best Bloom and is likely to challenge Dailmanach as the leading pink. The six under number consisted of four with white perianths and YR coronas in varying proportions, a distinctive 2 Y-O with a wide roll to a short trumpet, and a pale 2 Y-Y which created minimal impact. The exhibits in the minor placings were very close to the winner and so close to each other in merit that there was much discussion over the judges' decision. They were also the subject of an unprecedented event as on the first day the prize cards placed Clive Postles second and Brian Duncan third; but shortly before the close of the show, these cards were withdrawn and new ones appeared with the order reversed. No explanation was offered and Daffodils 1984-85 is awaited with more interest than usual.

Four very good exhibits were staged in the Guy Wilson Memorial for six vases of all white blooms and Rathowen emerged as very worthy winners.

Well established cultivars continued to dominate the single bloom classes and it is quite an event when a new introduction takes a first prize in one of the more popular sub-divisions. Rathowen had best Division 1 with a lovely specimen of Silent Valley which was adjudged Best Bloom in Show, but it was most unfortunate that an exceptionally fine specimen of Rima from Jim Pearce had to face such competition. From the good range of long-cupped cultivars, Clive Postles had best bloom with Ashmore; while Ron Scamp recorded another "Best Divison 3" for



John Lea's winning Engleheart collection included (top, L. to R.) 4-25-76, Achduart, 1-25-76, 2-7-75; (center, L. to R.) Gold Convention, Pol Voulin, 1-17-75, and 1-21-74; (bottom, L. to R.) Silver Convention, Loch Carron, 1-32-76, and Loch Hope.



Mr. Postles's winning Richardson Cup collection included (top, L. To R.) Sir Ivor, Panache, Loch Lundie, April Love; (center, L. to R.) Cool Crystal, Torridon, Purbeck, Loch Hope; (bottom, L. to R.) Shieldaig, Unique, Golden Vale, and Dover Cliffs.



Left, Rathowen's winning Guy L. Wilson collection: (top) Vigilante, White Star; (center) Silent Valley, Birdalone; (bottom) White Ermine, Broomhill; right, Silent Valley, Best Bloom at the RHS Show.

Achduart. In the small-cupped classes, Lemonade continued to gain preference over more recent introductions, and at last we saw winning blooms of Doctor Hugh grown in England. It was almost inevitable that Unique was best double, being preferred by the judges to a good bloom of Pink Paradica.

being preferred by the judges to a good bloom of Pink Paradise.

The Amateur Trophy classes were well below strength with Clive Postles winning the Bowles Cup with the only entry staged, and followed this with the Richardson Cup where there were four other competitors. All his blooms were of such high quality that he outclassed the opposition and it would be unfair to differentiate between the twelve cultivars so I list them all: Sir Ivor, Panache, Loch Lundie, April Love, Cool Crystal, Torridon, Purbeck, Loch Hope, Shieldaig, Unique, Golden Vale, and Dover Cliffs.

The sun continued to extend its appearance and made good its long absence with temperatures more appropriate to June. The Daffodil Society Show on 22 April reflected this change with plenty of good flowers of all types and color combinations. The Board Medal for three vases of three blooms was a highlight of the show and Jan Dalton scored one of the few major successes of the season over Clive Postles with vases of Viking, Rainbow, and Verona of the very highest quality to remind us that well-groomed blooms of reliable cultivars can still beat recent novelties.

The single bloom clases attracted entries from all parts of the country and the honors were well shared between senior and newer exhibitors. One of the latter, Charles Scanlon from Bradford, staged an outstanding specimen of Burntollet to win Best Bloom at his first attempt, an honor which has eluded many of the senior exhibitors.

In the collection classes, Clive Postles won four trophies; Jan Dalton, three; and our new secretary Don Barnes, two; with another newcomer, Tony James, taking the other two—the Walter Ware for six pinks, and the White Daffodil. The





Left, Winning entry in the Board Medal Class, Daffodil Society Show: Viking, Rainbow, and Verona; right, Rockall, Best Bloom, Harrogate.

new award, the James Barrington Memorial Medal for six stems from Divisions 5-8, went to Don Barnes, who also won the ADS Ribbon with a most attractive selection.

There was just time for a day at home to check progress and we were off to Harrogate where we found that the Norwich team of exhibitors were in top form. They had been forced to miss the London Show by a shortage of flowers, and the Daffodil Society Show had been held on the same day as Norwich Show. So this was their first "away" appearance. They soon showed us how much they had been missed as they completely dominated the collection classes. Seven very good exhibits were staged for the Northern Championship; and the Norwich pair, Geoff Bell and Paul Payne, were placed first and second in that order, and both had consistent quality throughout their exhibits. Paul Payne had Grand Champion (Best Bloom) with a very fine Rockall, and divisional champions in Tudor Love, Daydream, Achduart, and Foundling. Geoff Bell's champions were Golden Aura, Interim × Lisbreen, and Tahiti; while Wilson Stewart, making a belated appearance owing to the poor weather, had Reserve Champion with Loch Naver, and divisional honors with Comal, Newcastle, and Empress of Ireland.

Every foot of staging was heavily congested with record entries in most classes, and an overall quality which made every winner recognize that success was a real achievement. The show continues to show improvement in every direction and

now matches the standard of our other major shows.

To conclude the season, in the first week in May we had the usual fixture of the Daffodil Society Late Competition in London and on the following day the unique occasion of a Competition at the opening of the International Garden Festival at Liverpool. Both were favored with displays that were exceptional for so late a date; if combined they might well have been the show of the year. It was most notable that mid-season cultivars featured prominetly at both shows—Golden Aura, Torridon, Shining Light, Achduart, Delos—normally they would have been well past their prime by May 1. There were also first class blooms of late season

cultivars such as Misty Glen, Doctor Hugh, and Gay Kybo which are rarely seen at earlier dates. There was also at Liverpool a unique first appearance on the bench of Tripartite, raised by Richard Brook from Baccarat pollen on April Tears, with three split-corona florets to each stem with a quality rarely associated with split-coronas.

To complete his successful season, Clive Postles took the major share of the special awards at Liverpool, two Gilt Medals—for Best Bloom, a seedling 1 W-W, and Best Collection—and the Silver Medal for most points in the single blooms, a fitting reward for out leading exhibitor.

The competitive classes at the Festival were supported by Silver Medal displays by Carncairn Daffodils and Michael Jefferson-Brown; and the special award for a novelty daffodil went to a bowl of Quiet Day, the recent release from Carncairn.

Looking back, it may not have been a season for outstanding flowers but it was certainly one of real achievement as all the problems were overcome and we brought the modern daffodil to the attention of a wider audience than ever before, an aspect of our activities which is equally important as the improvement of our flower.



Left, Tripartite; right, Quiet Day

Memorial Contributions

Mrs. James	Craig	irs. Meri	on Yerger
John Lea		. Leslie	Anderson
			Anderson

NORTHERN IRELAND SHOW REPORT

SANDY McCABE, Ballymena, Northern Ireland ...

Nineteen eighty-four saw the N.I.D.G. put all the "Big Brothers" into a section by themselves. This year we adopted our proposed new schedule which forbade professional growers form competing against amateurs. We do not, however, preclude amateurs from competing against professionals.

That is not so Irish as it sounds! Our new schedule provides for an Open Section which, as its name implies, is open to all—professionals and amateurs alike. We then have three amateur sections—Senior, Intermediate and Novice—

and naturally the professionals are debarred.

It worked reasonably well but the peculiarities of the season meant that amateur competition for the professionals was meagre. The Open Single Bloom Classes called for seedlings—not in commerce. Very few amateurs can compete in these classes and perhaps a case could be made to allow amateurs to show

registered cultivars against the pick of the professional seedlings.

However, our show season opened on 7th April at Gilnahirk. The season was such that flowers were very late to bloom and had it not been for the efforts of Gilbert Andrews there would have been no flowers on display. He was the only serious exhibitor and judging was easy as most classes had only one entry. Where there was a multiplicity of entries, it was Gilbert competing against himself in an effort to give some semblance of a display for the public. Best bloom was awarded to Gilbert's Ben Hee.

Hillsborough and Bangor Shows clashed on the following Saturday, 14th April. Hillsborough was a nonevent with no serious exhibitors participating. They were trying their luck at Bangor. The only flowers at Hillsborough were the older garden varieties displayed as "Unknown" and entries in the Novice Section. No flowers of particular merit were recorded.

Information from Bangor has been scant to date, but I understand that Gilbert, William Dukelow, and George Marsden (the latter two from Omagh) were the

principal award winners.

Easter Saturday saw the re-emergence of the show organized by Coleraine Horticultural Society. Their chosen venue was Portstewart Town Hall which is situated on the seafront. The gently lapping waves coupled with brilliant sunshine

made it a most pleasing day.

Several of our enthusiasts had hoped to attend to support the 'new' venture as their last show was held in 1956. Due to a variety of mechanical and other problems only yours truly was able to compete, though Carncairn and Rathowen each staged noncompetitive trade exhibits which attracted much attention and evoked much favorable comment. Our real mission on this Saturday was to endeavor to show the budding local enthusiasts some of the newer cultivars and the correct manner of staging. I hope we succeeded and that Coleraine will once again become one of the leading shows in Northern Ireland.

Best bloom was awarded to my Burntollet with my Galahad being runner-up. Other noteworthy blooms were an unknown 2 Y-R shown by M. Wright;

Capisco, L. Conn; and D. Turbitt's Merlin.

The Novice Section was well contested by L. Conn, M. Donnell, and my daughter, Elizabeth, whom I am trying to innoculate with the Yellow Fever Virus. L. Conn won the section, with Best Bloom in the section going to a superb Irish Light shown by M. Donnell. Elizabeth gained her first red card in the trumpet class with Descanso.





Left, Burntollet; right, D-714

Ballymena Show on 25th April was held in the middle of a most unseasonal heat wave. For this show we had a panel of International Judges, being graced with the presence of Mr. & Mrs. W. Roese from California and Eddie Jarman and Reg Nicholl from Essex.

The Open Section saw keen competition between Ballydorn, Carncairn, and Rathowen. Many magnificent flowers were on display and best bloom award went to Rathowen's D.714 (2 W-GYY) which just pipped a beautiful Cool Crystal shown by Carncairn. Rathowen won the 12 × 1 collection class and included D.619 (2 W-W) and D.736 (1 Y-Y). Smokey Bear and Doctor Hugh were also outstanding. Carncairn were runners-up and best of their twelve were the afore-mentioned Cool Crystal, Firefox, and a very smooth Bunclody. Best in Ballydorn's third placed exhibit was a 2 W-W seedling bred from Stainless × 84 / 2 W-W/3.

Carncairn reversed the placings with Rathowen in the American Raised Class with me bringing up the rear.

Notable flowers in the Open Single Blooms were Carncairn 6/52/59 (1 Y-Y) and W.4/20; and Rathowen's D.677 (Irish Spendour × Bloomer seedling), D.826 (4 W-P), and Campion which, although correctly marked N.A.S. (classes called for flowers not in commerce) was adjudged best Division 5-12.

Best flower in the Amateur Senior and also Best Division 2 in the show was Gilbert Andrews's Golden Amber. This bloom was really immaculate and no one had ever seen it in such fine form. Loch Hope shown by Bob Sterling, G. Marsden's Loch Stac, and my Crenelet were the pick of the rest.

George Marsden won the Intermediate Section easily and his Tudor Minstrel was adjudged best bloom in the section. Other notable cultivars were Cairngorm, Irish Light and Premiere.

The Novice Section was well contested between Elizabeth McCabe, J. O'Reilly (another newcomer to the show scene), and D. Turbitt who made a journey from Coleraine. Elizabeth won the section with Mr. O'Reilly's Newcastle being selected as Best Bloom in the section.

Enniskillen Show on 28th April was the venue for the Championship of Ireland and associated classes. Brian Duncan retained his virtually unassailable grip on the Richardson Trophy. His winning twelve included D.598 (2 W-W) (Silent Valley × Easter Moon), D.663 (4 W-P), and Lennymore (2 Y-R). Carncairn showed a 2 W-W to be called Silver Fox which has the reputation of being extremely consistent, and I also liked Mentor (2 W-P) shown by Tom Bloomer.

Best bloom in the show went to Rathowen's Eminent—bred by G. Mitsch—which they showed in their winning Roesé Bowl entry. They also won the Royal

Mail Trophy with High Society and Smokey Bear taking the eye.

The Northern Bank Trophy for best unregistered seedling confined to amateurs only was won by John Ennis with a 2 W-W seedling bred from Misty Glen.

My Amber Castle was Reserve Best Bloom and also Best Bloom in Amateur Senior. The prizes in this section were keenly contested with Sam Bankhead, Michael Ward, George Marsden, John Ennis, and me, each picking up our fair share.

The season closed on 5th May at Omagh which hosted the Amateur Championship. The heat wave had continued unabated and consequently

trumpet daffodils were scarce.

Best Bloom in the show went to D.904 (4 W-P), another one of the seemingly endless stream of pink doubles which Brian Duncan is producing. Best Division 2 went to Michael Ward for Rameses and Sam Bankhead won Best Division 3 with Cool Crystal. I was successful with Elizabeth Ann (6 W-P) best Division 5-10.

We missed the competition from Carncairn who were busy at the International

Garden Fair at Liverpool.

For the second year in succession the Amateur Championship attracted only two entries. Last year it was too early—this year too late. I look forward to the day when it falls slap bang in the middle of the season and attracts at least five to six entries.

For the record, I was successful through staging a refrigerated twelve which I had intended to enter in the Championship of Ireland the previous week. Best were Silent Valley and Ben Hee which, as Michael Ward remarked, had no right to be shown on 5th May.

George Marsden was runner-up and also won the Intermediate. Section. This latter success means that George has gained well-deserved promotion to the Senior ranks and with John Ennis who was not able to compete fully this year due to the arrival of a son and heir, promises some stirring contests in 1985.

Harry Allen, another newcomer from Omagh, made his mark by winning the

Novice Section and had the best bloom with Merlin.

These notes were compiled with the help of a number of members of the N.I.D.G. and I am indebted to G. Andrews, E. Jarman, G. Marsden, and B. S. Duncan for their assistance.

Going round and round all alone? Get yourself organized. Join a Round Robin.

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THE FIRST THIRTY YEARS

Part 2

DELIA BANKHEAD, Great Falls, Virginia

Before the incorporation of the ADS in 1958, officers and directors were generally selected by the Board of Directors or the Executive Committee. In 1958, the first recorded Nominating Committee was empowered only to select directors at large. By 1959, it presented a partial slate of officers and nominations for regional vice presidents. Today it presents a slate of nominees for each officer, regional vice president, one director from each region, and two directors-at-large to be elected by the membership at the annual meeting. The secretary and treasurer are appointed by the Board.

Harry Tuggle was temporary secretary during the formation of the Society. Thereafter, six secretaries served the Society for twenty-nine years: Willis Wheeler, 1955-57; Estelle Sharp, 1958; Maxine Adams, 1959-63; Maxine Lawler, 1963-68; Ruth Johnson, 1969-72; and Kathy Andersen for twelve years, 1972-84. Three people have held the office of Treasurer: Serena Bridges, 1954-69; Mrs. Grover Roennfeldt, 1960-68; and Wells Knierim, 1968 to present. These nine people, along with the Executive Director, have provided the continuity and

dedication so necessary to ensure a well-run organization.

The idea of a salaried Executive Director was explored for three years prior to creation of the post in October, 1966, which was followed immediately by the appointment of George Lee. In early 1968, the Board detailed the duties of the Executive Director, a few of which are the administration of all Society business affairs, maintenance of all membership records, mailing of all publications, housing the library, and providing a semi-annual report to the directors. These reports were mailed to every director well before each Board meeting and contained most of the innovations later adopted by the Society. Through these carefully wrought reports, he created or revised most of the systems under which the Society still operates. His administration lasted until his death at 80 in January, 1978.

In the last few months of his presidency, Bill Ticknor carried out some of the Executive Director's duties, then assumed them on a formally appointed basis upon his retirement from that office. As his years in office were marked by greatly increased costs and double digit inflation, his primary concern was maintaining the financial health of the Society. Greater income was generated through expanded sale of publications and a slight increase in dues. Invested assets grew and

membership increased.

In the fall of 1979, Laura Lee Ticknor became Associate Executive Director, and in 1981 a clerk was hired to assist with increased paperwork. In 1984 the Ticknors retired, and Leslie Anderson was appointed the Society's third Executive Director.

The work of the committees, whose reports have filled reams of paper, can be summarized only briefly. Originally the titles and duties of the committees were somewhat different than those of today, but current titles are used in this narrative.

AWARDS

The earliest awards given at shows were listed in the 1957/58 Yearbook. The Carey E. Quinn Silver Award, the Rose Ribbon for best seedling, and the Purple Ribbon for best vase of five stems were offered at regional and state shows. For local and club shows, the White Ribbon for best vase of three stems and the Green Ribbon for best collection of twelve were available.

The Awards Committee was made a separate standing committee by the 1958 by-laws, and was first chaired by Mrs. Leon Killigrew. In 1959, the Board approved an award for the best seedling at a national show (Rose Ribbon). The year 1960 saw the creation of the ADS Gold and Silver Ribbons, as well as the Red-White-and-Blue and Maroon Ribbons, Mrs. Killigrew also proposed an ADS Silver Medal for service to the Society.

During Mrs. T. E. Tolleson's tenure (1961-1963), an anonymous donor offered the Roberta C. Watrous Gold and Silver Medals for a collection of twelve miniatures, to be given first in 1964. Also in 1963, as a result of the work of the special committee on miniatures, the Miniature Gold Ribbon was authorized and rules for the Lavender Ribbon were redefined.

Under Marie Bozevich's management (1964-1967), the show manual, published in 1964 and revised in 1967, codified show rules and procedures. It also established the system of awards to be given at local, state, regional, and national shows. An updated version of this material is in the new Handbook.

Frank Seney became Awards Chairman in 1967. In October of that year, the Board approved creation of the Carey E. Quinn Gold Medal for national shows, to be available in 1968. The next year, a Junior Award was created. In 1970, the first of Elizabeth Capen's three detailed proposals (based in part on Mr. Seney's earlier work in 1963) for an award for daffodils (similar to a Dykes medal for iris) was tabled and not revived by the Board. The Harry I. Tuggle Award was first offered in 1971, and Mrs. Theodore Pratt donated the Larry P. Mains Trophy—both for national shows only. In 1972, the Miniature Rose and Miniature White Ribbons were first offered. Show rules were revised again in 1972 and included for the first time the exhibitor's sole responsibility for correct classification.

Mildred Simms assumed the chair in 1973, the year the AHS Silver Medal (now a gold medal) was first given and the Matthew Fowlds Medal was established. Rules for all ADS medal classes were revised to allow an exhibitor to win each medal once only and to provide ribbons for repeat winners. In 1974, the Rose and Miniature Rose Ribbons were eliminated, as it was thought there was not much public interest in seedlings. (These were reinstated in 1977). The first award from an overseas donor appeared in 1976 with the gift of the Carncairn Cup from Kate and Robin Reade—to be awarded for a collection of five Irish-raised daffodils. The ADS offered its first trophy to an overseas group—Wells Knierim proposed donating a trophy to New Zealand Shows for American-raised cultivars. The next year, he collected money for the silver which Marie Bozievich used to make a second trophy for New Zealand. The two trophies alternate between the North and South Island shows. The year 1978 brought reciprocity, with Phil Phillips and Lindsay Dettman offering awards to ADS national shows for New Zealand and Australian collections. Dr. & Mrs. Tom Throckmorton contributed the Grant and Amy Mitsch Trophy, which was handmade in silver by Marie Bozievich, for the best vase of three seedlings at national shows. Mrs. Simms proposed completely standardized schedules for the different types of shows.

Mrs. Phil Lee replaced Mrs. Simms in 1979. That year the Olive W. Lee Bowl, previously limited to certain regional shows, was made a national award. The Kells Plate, presented to Wells Knierim at the World Convention in 1979, was in turn given by Wells to the ADS for a new Northern Ireland award, and the (English) Daffodil Society presented an award for five English-raised daffodils. Charles and Amy Anthony donated the John and Betty Larus Trophy for the best vase of three miniature seedling candidates at the national show.

In 1981, at Dr. William Bender's suggestion, the board created the newest ADS award—the Throckmorton Ribbon—which is now offered in all—except small—ADS shows. On the death of Mrs. Lee in 1982, Mrs. Hubert Bourne assumed the chair of this very active committee.

BREEDING AND SELECTION

The Breeding and Selection Committee was very active in the early years of the Society. First, for two years under Willis Wheeler, who established many important relationships with foreign hybridizers; then from 1959 until 1968, Roberta Watrous corresponded with and collected much valuable data from hybridizers throughout the world and authored a regular column, "The Hybridizers' Forum," in the Journal. In 1960, she introduced the set of rules and definitions governing seedlings which is still in use.

There is no documentation of the years between 1968 and 1980, when Bill Bender became chairman, "after a long hiatus" (Board minutes). In addition to several breeding studies initiated, he proposed that a means be devised to salvage the life work of amateur hybridizers upon their death; and a lively exchange of ideas and information between hybridizers, amateur and professional, is being carried on at regular hybridizers breakfasts held during annual conventions.

CLASSIFICATION, DATA BANK, AND REGISTRATION

Classification and Registration were originally one committee. Mrs. J. Robert Walker, Mrs. Lawrence Wharton, Mrs. John Wister, and Mrs. W. L. McCoy were the early chairmen of this committee. Mrs. Walker was the first chairman and served again between 1964 and 1976. Mary Lou Gripshover was Classification Chairman for two years before becoming Editor, and from 1978-84 Amy Anthony worked to clarify classifications and to persuade commercial growers to use correct classification in their catalogs.

Since its formation, this committee has worked continuously and diligently over the years to clean up RHS misclassifications and to eliminate lost or unknown cultivars from the RHS Classified List. (Until 1977, this list was the only reference available on daffodil names.) Many American names, registered but never used or unknown, were eliminated from this list in 1960. In 1969, the RHS accepted this committee's recommendation for using Split-Corona as the official name for Division 11. Mrs. Walker researched classification changes for Divisions 4,5,6 and 7 in 1973 and the following year sent to the RHS for approval a proposed redefinition of Division 9.

When the ADS became the authority for all American registration in 1955, all applications to register new daffodil cultivars by name and classification went to the Classification and Registration Committee. In 1965, Registration was separated from the Classification Committee, and the position of Registrar was created. Only one person has filled this important position from its beginning—Polly Anderson. She has established a record for length of service as she enters her twentieth year as Registrar this year. She approves all applications for new names before sending them on to the RHS, still the international authority.

During the early 70s, the Classification Committee made many well-researched proposals to the RHS on color definition, reverse bicolors, and division descriptions. RHS response to these was slow, indifferent, and frequently not forthcoming. Frustration over the RHS's apparent lack of interest gave ammunition to the revolution in classification that was to occur in 1977.

At this point, it is appropriate to look back to the beginnings of what was to become the Data Bank. At the Board of Directors meeting on October 12, 1963, Bill Pannill spoke of the need to compile a list of daffodil parentage and described how easy it would be to "put it on tape, once completed." President Wheeler appointed a committee consisting of Bill Pannill, Tom Throckmorton, and Roberta Watrous to investigate the possibility. By April, 1964, Dr. Throckmorton had ready for the Board a proposed system of recording daffodil data, including a new system of classification by color code letters, on the IBM computer 'George' at his Des Moines, lowa, hospital. He offered to underwrite all expenses for the project, but the Board agreed to contribute and authorized a fund for gathering data on daffodil parentage. He was also authorized to enlist the cooperation of the RHS with respect to exchange of data on registration.

The first Data Bank was published in 1965. It then sold for \$3.00. Also in this year, Dr. Tom suggested the roster be put on the computer. This became a reality in 1966, with 'George' also producing judges' rosters and mailing labels for

publications.

The Data Bank has been reprogrammed and updated often in the intervening years and has gone through several generations of computers. It now contains more than 12,500 listings and is capable of instant retrieval of information. Any type of printout may be obtained (for a bit more than \$3.00!). The most detailed printout is unique. It is called the Stud Book, and is a list of all known cultivars with parents and four grandparents of each. It was first printed in 1979 and was placed in the Library as a memorial to George Lee. Only one set exists, and is destroyed upon receipt of an updated copy. A 1982 edition is available for perusal (but not loan) in the Library.

Information on new registrations still arrives very slowly from the RHS, and has delayed Dr. Throckmorton's new editions more than once. This situation may be

corrected by the appointment in 1984 of a new RHS Registrar.

Dr. Throckmorton's other great project—the institution of his color coding system for the classification of daffodils—has had a more uncertain and controversial history. The March, 1973, Journal carried a complete explanation of the proposed new system and a color-coded drawing of Green Island, 3 W-GYW, in color on its cover. In April of that year, Dr. Throckmorton was authorized to go to London to present and urge the new system to the RHS. He did succeed in getting them to suspend publication of their Classified List and to allow the current one to remain in print as a reference for daffodils introduced prior to 1968.

The next two years passed with mounting frustration over the inaction of the RHS, which in 1975 printed a new Classified List, its last. Dr. Throckmorton proposed a new ADS list—Daffodils to Show and Grow—a small format which would contain all cultivars introduced since 1959 plus 400 names (to be selected by an international committee) of pre-1959 cultivars. Though the proposal was approved promptly, Dr. Throckmorton elected to delay printing until the 1975

RHS list became obsolete.

In 1977, the RHS finally accepted the revised classification system and began sending Dr. Throckmorton copies of all new registrations. Color coding became the official classification system on July 1, 1977, but the debates on its merits were far from over. In the fall, the first edition of *Daffodils to Show and Grow*, containing about 5000 listings, was printed. It became the classification authority for all ADS shows (supplemented by the Data Bank). The Board ruled that fall that color coding in shows would be at the option of each show chairman.

The two issues involving color coding which have been most hotly debated have been the use of color coding in shows and the judging controversy arising from the changeable colors of the 'toned' and reverse bicolor daffodils. (See the December 1979 *Journal* for a look at different opinions on variable color). The

suggestion put forth by Helen Link in that issue on the use of a symbol, 'V,' to denote variability of color was incorporated into the *Data Bank* and *Daffodils to Show and Grow* in 1980 and is now available to alert judges to the existence of this condition in certain cultivars.

In 1981, after much debate and several conflicting motions on the use of color coding in shows, President Bozievich prevailed upon the Board to continue to allow local option on the issue. Each show schedule now must specify if color coding is or is not required.

GARDEN AWARDS

Though the idea of giving awards to flowers had been pursued many times in several forms, it was not until 1980 that a committee to implement a garden award was created by President Bozievich. In that year the Board approved the concept to offer each year an award for an outstanding plant or flower, to be called the John and Gertrude Wister Award. Chairman Link proposed a testing system through experienced growers and test gardens and in 1983 sent out over 100 bulbs for testing. The program is now well under way with results expected by 1986.

HEALTH AND CULTURE

Only two people directed the efforts of the Health and Culture Committee for its first twenty-seven years. Until 1968, it was Dr. Harold King's bailiwick; then Willis Wheeler took on this work for thirteen years. During those years, all aspects of pests and diseases were under continuing investigation. Articles on these and new developments in the culture of daffodils appeared in nearly every ADS publication of the time, and the members were kept informed as new discoveries were made. From 1981 to the spring of this year, Ted Snazelle built upon these efforts with his research into basal rot and bulb fly control. Through these three chairmen, the ADS has accumulated a comprehensive body of work on health and culture, which is briefly synthesized in the new *Handbook*.

As a result of the bequest of the Betty and John Larus Fund, the Board created a new standing committee in 1981—the Education and Research Committee—to review and approve research grants to be financed by income from the fund. The Board has increased the fund by the addition to it of surpluses from the 1982 and 1983 conventions.

These two committees have just been combined into the Reseach, Health and Culture Committee under new chairman Julius Wadekamper.

HONORS

The Society gives two awards for service—the Gold Medal for pre-eminent service to the genus Narcissus, and the Silver Medal for exceptional service to the ADS.

The Gold Medal was first approved in 1958 and was limited to Americans. The following year, Willis Wheeler persuaded the Board to return to the original concept of an international award, and the Awards Committee recommended the first recipient, Dr. E. van Slogteren of The Netherlands, for his work on daffodil diseases and pests. In 1960, the Awards Committee proposed the Silver Medal to the Board which approved it the next year to be available in 1962.

Until 1965, either the Awards or Executive Committees made all the recommendations for these medals. At that time, George Lee proposed that an Honors Committee be created, consisting of the three immediate past presidents

and the current president as non-voting chairman. Votes on candidates must be unanimous and would be binding on the Society unless overturned by a 2/3 majority of the Board. In 1967, rules were amended to give the Honors Committee total control over the awards and to require strictest secrecy until announcement at the annual meeting. Any member may nominate a candidate for either award by a written nomination to the current president, with a seconding letter by another member. Either or both medals may be withheld at the discretion of the committee. The recipients are listed below.

	Gold Medal	Silver Medal
1959	Dr. E. van Slogteren, Holland	_
1960	B. Y. Morrison	_
1961	Dr. John C. Wister	
1962	Judge Carey Quinn	Mrs. Lawrence R. Wharton
1963	Dr. Abilio Fernandes, Portugal	Mrs. Goethe Link
1964		George Lee
1965	Grant Mitsch	Willis Wheeler
1966	Alec Gray	Laura Lee Cox
1967	Mec Glay	Kitty Bloomer
1968		Harry Tuggle
1969	_	riarry ruggie
1970	_	Wells Knierim
	_	vvens Kineriii
1971	Matthew Fowlds	Pakanta Watnasa
1972	Matthew rowlds	Roberta Watrous
1973	_	John Larus
1974		
1975	Murray Evans	Polly Anderson
1976	Matthew Zandbergen	Bill Pannill
1977	Helen K. Richardson	Tom Throckmorton
1978	—	
1979	-	
1980	Tom Throckmorton	Marie Bozievich
1981	Barbara Fry, England	Louise Hardison
1982	*torus	
1983	Phil Phillips, New Zealand	Mrs. Royal Ferris
1984	Bill Pannill	Mary Lou Gripshover

JUDGES AND SCHOOLS

Two of the issues on which the Society has focused much of its attention have been (1) the accreditation of judges and standardizing and improving judging practices and (2) accrediting and standardizing shows and establishing awards.

The original committee to take on these issues was called Awards, Accreditation and Test Gardens. For two years it operated under the chairmanship of Serena Bridges, then in 1958 it was divided into four: Awards, Judges, Study and Show Schools, and Test Gardens. In 1984, Judges and Schools have again become one committee. Because of the inter-relationship of these issues, handbooks, manuals and rules have been published by several committees, standing and special. This account will attempt to sort them out chronologically.

In 1956, first chairman Serena Bridges proposed a scale of points for judging, rules for exhibitors and accreditation of shows, and designed the first study outline for judges' schools. In the same year, Carey Quinn outlined a proposed show

schedule for standardizing shows. In the year following, controversy over accrediting judges began in earnest and Judge Quinn "sticks out his neck" and says, "...the basic objective is to fix, codify and unify judging practices among those persons who have a sound knowledge of daffodils and daffodil varieties." President George Lee appointed a committee of all Regional Vice Presidents under the chairmanship of Helen Link to solve the problems of accrediting judges and shows. Dr. Freeman Weiss proposed we have one complete handbook on culture, shows, judging, etc. The first judging school was held at the 1957 convention and taught by Serena Bridges and Harry Tuggle. In 1958, temporary judges cards were issued to 156 members generally considered to be knowledgeable judges, plus the 165 members who had completed at least one of the judging schools. (Several had been given in 57 and 58.) In 1959, Helen Link, Schools Chairman, created the first Judges and Schools manual.

By 1960, Mrs. Paul Garrett, Judges Chairman, reported 49 Accredited Judges, 203 Students and 18 "Special Judges," a group of very knowledgeable people designated judges by the Board of Directors. (These continued to be listed as "special" until 1978 at which time those remaining were incorporated into the

regular roster.) Six judging schools were given in 1960.

In 1961, students were pressed into service as regular judges due to shortages throughout the country. The judging school manual was revised in 1963 by Eleanor Hill, Schools Chairman, who created standard course forms and examinations. The Board amended judging rules to allow judges to exhibit, provided that "no judge, accredited or student, may judge his own entries in any show approved by the ADS."

Laura Lee Cox became Judges Chairman in 1963 and served longer than any in that job—fourteen years. Her efforts culminated in the publication in 1974, with Schools Chairman Helen Link and Awards Chairman Mrs. Simms, of the Handbook for Exhibiting and Judging Daffodils. Mrs. Link was twice Schools Chairman—from 1958-62 and from 1964-1977. Judging schools peaked at seven held in 1975. Mrs. Cox proposed, in 1974, that judges be required to take periodic refresher courses, that they grow newer daffodils and that they use their judging skills regularly.

In 1977, Margaret Yerger assumed the Schools chair, serving until 1983, when Naomi Liggett became the Chairman. Also in 1977, Betty Barnes became Judges Chairman, serving until her retirement in the spring of this year. On the recombination of these two committees in April, 1984, Naomi Liggett became its first

Chairman.

Requirements for student and accredited judges were the subject of hot debates during the seventies. Reports of many inept judges brought suggestions to require more than three student judgings, to require accredited judges to take more initiative in instructing students and to evaluate them instead of merely acknowledging their presence on a panel. Though some areas have many judges, in 1979 Minnesota could not find enough local judges. A special committee—the Handbook Revision Committee—was authorized by the Board in 1979, and chaired first by Margaret Yerger, then by Charles Anthony. Marie Bozievich made this project her first priority on becoming president in 1980, and through that year revisions to the Handbook were thoroughly debated by Committee and Board. Judges took their first refresher courses (now mandatory every three years) in 1980 and the rules for judging in national shows were revised and published.

Finally, in 1981, the revised Handbook for Growing, Exhibiting and Judging Daffodils was published. It is the synthesis of years of experience and work by Awards, Judges, and Schools Chairman, as well as the Handbook Committee and

other members with special expertise and is surely one of the great accomplishments of the ADS. It contains all the study material for judging schools, rules governing judges and shows, as well as a comprehensive section on daffodil health and culture.

Less than complete records appear to indicate that the number of ADS approved shows has fluctuated in the past twenty-two years. There were forty in 1962 and not again until 1979. The low was thirty in 1976, and most years have averaged thirty-two to thirty-five. The number has risen to forty again in 1984.

The number of accredited judges peaked in 1980. Representative years show:

1957 – 321 temporary	1975 - 237
1960 - 49	1980 - 287
1965 - 160	1983 - 252
1970 - 212	1984 - 258

LIBRARY

Established originally in the first By-Laws, the library was first the province of Mrs. John Moats through 1962. She began the long process of acquisition of publications and attempted to define the purposes of the collection. Bill Pannill had this job for a year before becoming First Vice President. During Wells Knierim's tenure (1964-1968), the library acquired many rare publications. He arranged for much material to be donated to the collection by several European and American donors. When Kate (Kitty) Bloomer took over the collection on her retirement as Journal editor in 1968, she set about making it the most complete library on the subject of daffodils in the world. She also had all the early ADS publications bound into volumes and instituted other conservation measures for the material.

In 1969, Executive Director George Lee began cataloging the library; which was then in New Canaan, Connecticut. On his death, it was moved to North Carolina and is now located at the Executive Director's office in Hernando, Mississippi. On the retirement of Mrs. Bloomer earlier this year, Mrs. W. D. Owen became Librarian. A complete list of publications available to members was printed in the September, 1984, *Journal*.

MEMBERSHIP

The Membership Committee was formed by the 1958 By-Laws. It collects data on members and maintains contact with them through the regional vice presidents. It has made recommendations on categories of membership and means of attracting and retaining members. Only three have chaired this committee: Louise Hardison (then Linton) 1958-61, Mrs. Margaret Thompson 1961-1980, and current chairman Frances Armstrong.

MINIATURES

Two names stand out in early work on miniatures: Dr. Helen Scorgie, whose miniature symposia appeared in the Yearbook from 1956-1965, and John Larus, whose research formed the basis for the creation of an Approved List of Miniatures. During the early 60s, he gathered information from as many sources as possible and in April, 1963, presented a report containing a list of cultivars and species considered to be eligible for listing as miniatures, with a recommendation that they be judged separately. On approval by the membership, the Board created a three-member standing committee which was authorized "to establish

rules under which the Approved List of Miniatures may be revised and put such revisions into effect." Awards for miniatures were immediately established with criteria for the Watrous medals, Miniature Gold Ribbon, and the Lavender Ribbon being amended to fit the new list.

No appointments to this committee are recorded in Board minutes; and in 1965, a standing committee was again approved. No reports are recorded until 1968, when a "new chairman" (John Larus) was appointed by President Pannill. During his chairmanship—through 1976—the list grew and was revised regularly.

On assuming the chair in 1977, Peggy Macneale recommended dropping from the list all miniatures not commercially available. The committee was expanded to eight in 1979 and the list revised. By 1980, New Zealand had adopted our list, and seedlings could be shown in Watrous collections. The 1983 rules revision states that additions to the list will be limited to those flowers receiving three nominations from members plus commercial availability. Growing requirements for judges were changed to require judges to grow "some miniatures" and research went forward to determine cultivars which may be extinct. As of spring 1984, Joy Mackinney will carry forward the work of this committee.

PHOTOGRAPHY

Five chairmen have steered the Photography Committee from its establishment in 1959. Larry Mains built up the first slide sets, followed by Bernice Ford (1972-1977), Sally Stanford (1977-1981), Tag Bourne (1981-1982), and current chairman Ann Shryoc. The slide sets have grown to eleven and have been continually updated. The committee has also had an 'angel' in the person of Wells Knierim, who has donated hundreds of his own slides for the sets. Many other members have also donated slides, including overseas members Brian Duncan, John Blanchard, and George Tarry. The eleven sets currently in the slide library were rented thirty-six times in the past year, and have made a substantial contribution to public education on daffodils.

PUBLICATIONS

The regular publications of the infant Society began modestly with bulletins typed on letter paper. These originated from the first Editor, Dr. Freeman Weiss (1955-56), who also edited the first Yearbook, 1956. During Carey Quinn's editorship, 1957-58, the format of The Daffodil Bulletin became smaller. It averaged 8 pages, was printed in green ink, and had no cover or ads. On his retirement in January, 1958, he printed resolutions for members:

- 1. Live with and enjoy your flowers more—try to note their details.
- 2. Try a few new ones each year—don't close your mind.

3. Try a bit of hybridizing—herein lies progress.

With the May, 1958, Bulletin, Kate (Kitty) Bloomer became Editor, a position she was to hold for ten years, and began publishing four editions on regular dates each year. Seven Yearbooks were published from 1957/58 to 1964, edited by the Publications Committee. These contained collected data of the ADS and many articles contributed from around the world, and are treasures of historical information.

In 1964, the Board decided to discontinue publication of yearbooks and to incorporate their material into an expanded quarterly publication, *The Daffodil Journal*. Mrs. Bloomer's first edition appeared in September, 1964, on glossy paper in the format we know today. Dedicated to Guy Wilson and Lionel

Richardson, it had color on the cover and contained the first article on the new Data Bank, During the next four years, she expanded the Journal from eight to an average of fifty pages in her last year as Editor.

In 1968, the year Roberta Watrous became editor, the Publications Committee was restructured. (Its publications other than the *Journal* are reviewed elsewhere.) Mailing of the *Journal* first became a duty of the Executive Director, then of the Publications Chairman. Publications chairmen: Carey Quinn, 1957-61; Willis Wheeler, 1961-68; Bill Ticknor, 1968-72; Laura Lee Ticknor, 1972-78; Ruth Pardue, 1978-80; and current chairman Mary Cartwright.

During her ten years as Editor, Mrs. Watrous established many regular departments which still appear in the Journal and expanded the number of contributions from here and abroad. In 1976, Executive Director Lee reported growing interest from overseas in the Journal. The Northern Ireland Daffodil Group, which asked permission to use material from the Journal, reported that back issues of the Journal were the best sellers on their publications list.

Mary Lou Gripshover became Editor with the September, 1978, edition. Under her direction, the *Journal* has won the Award of Merit from the National Council of State Garden Clubs for "excellence in horticultural education" for five consecutive years, 1979-1984. Color was added to the *Journal*, originally through the generosity of Wells Knierim, with the March, 1983, issue. Now regularly budgeted, it is a significant addition which has stimulated greater interest in members. This reporter has found it to be a great membership tool. Nearly 75% of membership dues now goes to print and mail the *Journal*, as the annual cost of a single set of four issues is in excess of \$7.00.

The last three editors have received the ADS Silver Medal for service to the Society, and in turn have guided the *Journal* into the pre-eminent daffodil periodical in the world.

PUBLIC RELATIONS

The first record of a Public Relations chairman comes in 1960 with a reference to Mrs. Henry C. Prange who was Publicity Chairman at least until 1964. No reports were found until 1968 when Mrs. Grover Roennfeldt became Public Relations chairman for a year. In 1969 Eleanor Hill became chairman and served until 1973 when Margaret Yerger became chairman. She initiated a committee approach, using regional committee members to achieve maximum publicity in each region. She campaigned for greater interest in the daffodil among garden writers and proposed an ADS membership pin as a means of gaining more recognition for the daffodil and the Society. In 1977, when Virginia Perry became chairman, she expanded the committees to three members from each region, sending suggestions and information in three newsletters each year. She collected enough news articles on daffodil matters to fill two large scrapbooks, and worked to correct the errors which frequently appear in daffodil articles in other publications. At the request of President Anthony in 1979, she, too, tried to get commercial catalogs to use correct nomenclature. Of many letters written to these firms, only Burpee and DeJager were cooperative. At her retirement in 1983. Nancy Howard became chairman of this committee.

ROUND ROBIN

One of the original committees, the Round Robin Committee was not activated until 1959; though several robins were established in the earliest days. Two men's robins were circulating in 1957. Dr. Glenn Dooley was the first chairman and

reported on the robins until 1980. In 1964, a record number of sixteen active robins was reported. Since 1980, first Richard Ezell for three years and now Otis Etheredge have tracked (or searched for) frequently flightless circulating letters. Chairman Etheredge has reconstituted four robins and is working to resurrect others which are lost or inactive.

SHOW REPORTER

The first show reports appeared in the September Journals of 1965-67 and were written by Eleanor Bolton. Beginning in 1968, show reports were compiled and published by the Awards chairman until 1975, when the board created the position of Show Reporter. Mary Lou Gripshover wrote the show reports for 1975 and 1976. In 1977, the job went to Loyce MacKenzie whose complete—and delightful—reports now fill half the September Journal.

SYMPOSIUM

The Symposium was begun in 1956 by Charles Meehan, who, with a large committee, published reports until his resignation in 1958. Harry Tuggle, one of the original reporters, took on the Symposium in 1959, and published his first report in 1961. Reports were published in different formats until illness forced his resignation in 1968. Co-chairman Dr. Helen Scorgie published miniature symposia form 1956 to 1965. Through the Meehan and Tuggle years, the reporters for symposia were members of ADS selected as 'critical, experienced reporters.'

In 1968, all members became potential reporters as new chairman Elizabeth Capen instituted the Symposium by ballot. Responses averaged 5%, 10% with contributions from regional vice presidents. In 1976, Chairman Jane Moore redesigned the reports and received a 28% response the following year. However, responses declined again and in 1982 the Symposium was abolished at the request of Chairman Moore who felt show reports and test gardens provide more and better information.

TEST GARDENS

The first test garden projects were established under Chairman Miller Thompson's committee in 1959 at Kingwood Center, Mansfield, Ohio; Alabama Polytechnic Institute, Auburn, Alabama; and Clemson College, Clemson, South Carolina. These three were for years the only formally recognized test gardens, though there is frequent mention in the record of other public plantings. In 1966, Dr. Freeman Weiss began experimenting with growing daffodils in a cold climate— Minnesota—and this garden remained an informal test garden until its approval as a permanent scientific project in 1976. During Walter Thompson's chairmanship (1966-1980), a new test garden was begun at the University of Arkansas and replanting and other work was done at the original gardens.

When Ruth Pardue became chairman in 1980, the number of test gardens burgeoned to fifteen. She also defined test, trial, and display gardens and wrote criteria for their establishment (see June, 1983, Journal for complete list). Four new gardens were added in 1983. The expanded program is now being carried on by Marie Bozievich who assumed the chair in April, 1984.

We are a vital, growing organization which has made much of its progress through controversy and trial and error. In doing the research for this history, I found many more reasons to be proud of being a part of this society. The substantial accomplishments of the last thiry years will surely motivate us in the challenges ahead.

BULLETIN BOARD

FROM THE PRESIDENT'S DESK

For some time to come recipients of the *Journal* will be reading about daffodils and people who grow and show them down under. Australian and New Zealand growers not only know how to raise daffodils, they also know how to entertain visitors. Hospitality was cordial, gracious, and superb everywhere we went.

It was amazing to see the large number of seedlings exhibited in shows. Prize

winning cultivars often are not registered; what a pity!

To our down under friends we again say THANK YOU, and to our ADS members who could not make the trip we say, you missed hospitality and beauty at its best.

I do not wish to elaborate further on the Nylex Springworld 84 trip since others who made the journey will report the details. My personal comment is that Springworld was indeed an awe-inspring extravaganza and one of a kind.

HELEN K. LINK

JUDGING SCHOOLS

The following schools are scheduled for spring, 1985:

SCHOOL III March 16, 1985, Hernando, Mississippi; Chairman: Leslie

Anderson, Route 3, 2302 Byhalia Road, Hernando,

Mississippi 38632.

SCHOOL II March 10, 1985, Sherman Foundation Gardens, Corona del

Mar, California; Chairman: Marilyn Howe, 11831 Juniette,

Culver City, California 90230.

SCHOOL II April 10, 1985, Charlottesville, Virginia; Chairman: Donald

King, RFD, Box 236-C, Hartfield, Virginia 23071.

SCHOOL II April 14, 1985, Benjamin Wegerzyn Garden Center,

Dayton, Ohio; Chairman: Mrs. Fred R. Schuster, 4315

Strobridge Rd., Vandalia, Ohio 45377.

SCHOOL II May 1, 1985, Greenwich, Connecticut; Details to be

announced later.

Required reading for all courses is the Handbook for Growing, Exhibiting and Judging Daffodils.

School II Chapters 5, 8, 9, 2 (except Page 6), 7 pages 30-33 Chapters 6, 2 pages 5-7, and 7

For further information contact the local chairman of the school. Accredited Judges needing refresher credit may attend any of the judging schools.

—NAOMI LIGGETT: Chairman, Judges and Schools

SEEDLINGS IN SHOWS

All seedlings, both miniature and standard, must be identified by a number designation assigned by the originator. If the originator has not provided a number for the seedling, it cannot be shown in ADS accredited shows. See Rule #7 on Page 22 of Handbook for Growing, Exhibiting, and Judging Daffodils. In the future, should an un-numbered seedling win an award, it shall be forfeited by the exhibitor.

-MRS. HUBERT BOURNE, Awards Chairman

STATEMENT OF OWNERSHIP, MANAGEMENT, AND CIRCULATION

(Act of August 12, 1970; Section 3685, Title 39, United States Code.)

Date of Filing: October 1, 1984. The Daffodil Journal is published quarterly at Rt. 3, 2302 Byhalia Road, Hernando, Mississippi 38632, with general business offices of the publisher at the same address. The name and address of the Publisher is American Daffodil Society, Inc., Rt. 3, 2302 Byhalia Road, Hernando, MS 38632; Editor, Mrs. Paul Gripshover, 668 E. Olive Ave., Sunnyvale, CA 94086; Chairman of Publications, Mrs. Robert Cartwright, 1216 Goodloe Drive, Nashville, TN 37215.

Owner of the publication is American Daffodil Society, Inc. There are no bondholders,

stockholders, or mortgagees.

Total number of copies printed (average for preceding 12 months), 1700; paid circulation, 1453; sales through agents or dealers, none; free distribution, 64; total number of copies distributed, 1517. Total number of copies printed (single issue nearest to filing date), 1700; paid circulation, 1404; sales through agents or dealers, none; free distribution, 88; total number of copies distributed, 1492. I certify that the statements made by me above are correct and complete.

-MARY LOUISE GRIPSHOVER

CLASSIFICATION CHANGES

As announced at the Board meeting in April, the following cultivars have been reclassified as follows:

Cricket 5 Y-Y Amber Castle 2 Y-WWP Cairngorm 2 Y-WWP

CALL OF THE ANNUAL MEETING

The annual meeting of the American Daffodil Society, Incorporated, will be held on Thursday, April 25, 1985, at the Holiday Inn of Valley Forge in King of Prussia, Pennsylvania, for the following purposes:

1) for the election of officers and directors as provided by the By-Laws

2) to take action and transact any other business which may properly and lawfully come before the meeting.

By order of the Board of Directors MARILYNN J. HOWE, Secretary

CORRECTIONS . . .

The September Journal seems to have had more than its share of errors! On page 8, the photographs were reversed, and the white and yellow flower is Bender 75/57, while the yellow and red flower is Loch Lundie. The flowers on page 41 should have been identified as Cantatrice, and those on page 42 are Falstaff.

. . . AND MORE CORRECTIONS!

The show report failed to take note of the fact that Bob Spotts won the Watrous Medal at the LaCanada show in California, and Mrs. E. T. Cato won both the Red-White-Blue and Maroon Ribbons at the Princess Anne, Maryland, show. In Mansfield, Ohio, it was Sandra Grace Ross who was the winner of the Miniature Gold Ribbon with Minnow.

Our congratulations to these winners, and our sincere apologies for the errors.

DAFFODILS TO SHOW AND GROW, 1985

First come, first serve! The new "list" is now in preparation and will be available after the first of the year. It will include registrations through 1984 minus those daffodils that were named earlier but never made available to the public. In format it will be exactly like the 1980 edition. DTS&G is world famous among daffodil people; but for those just becoming "one of us," it is a pocket sized, classified, descriptive list of over 5,000 daffodil names—all of those that one is ever likely to see. No exhibitor or judge can afford to be without it. The book is the result of the genius of Dr. Tom and Jean Throckmorton of Des Moines, Iowa, and his great computer.

Its cost remains the same—\$4.00—and can be purchased from the Society's Executive Director, Miss Leslie Anderson, Rt. 3, 2302 Byhalia Rd., Hernando, Mississippi 38632. There is expected to be an immediate sale of 1,000 copies putting a time consuming burden on our busy Executive Director. Those who send in their check right away will be assured of getting their copy shortly after the

book is off the press and before the season starts.

By sending in your order now the book can quite possibly pay for itself as it leaves the printer, a great help to your Society.

— W. O. TICKNOR

OF INTEREST TO TRAVELERS

Members who are planning to attend the ADS Convention in King of Prussia, April 25-27, 1985, may be interested in details of shows to be held in two nearby cities, both with many visitor attractions.

On April 20 and 21, the Washington Daffodil Society will hold the Middle Atlantic Regional Show at the National Botanic Garden Conservatory (at the foot of the U.S. Capitol). Entries may be made from 1:00 P.M. Friday, April 19, to 9:30 A.M. Saturday, April 20. The show will be open Saturday 2:00-5:00 P.M. and 9:00 A.M.-5:00 P.M. on Sunday.

The Maryland Daffodil Society Show will be April 24 and 25 at the Brown Memorial Church on Charles Street in Baltimore. Entries will be received 4:00-8:00 P.M. on Tuesday, April 23, and 8:00-10:30 A.M. on Wednesday. The show will open

at 2:00 P.M. on Wednesday.

Both locations have several convenient hotels, and King of Prussia is within easy striking distance from both cities. The show chairmen (listed elsewhere in this issue) will be happy to provide help and information to members who would like to come to the area a bit early to see more daffodils.

FROM THE EDITOR'S DESK

Changes—life is full of them. And you have no doubt noticed some changes about the *Journal* this time. At my request, Gene Bauer has designed a new cover page for us, which I hope you will like as much as I do; and I am especially pleased that she has also done the painting of Magician which graces our cover.

Another change—but a temporary one—is that you're receiving your Journal about a month late. That has been caused by a change in my address. We have followed Horace Greeley's advice to "Go West" and moved to California (you'll find my new address on the inside cover), and so personal matters have taken priority over editing chores. We are temporarily settled in an apartment, and the several thousand bulbs which also came west are settled in a cherry orchard, an arrangement which I hope might prove permanent. It is our hope that the March issue will be in the mail to you by March 1. We are sorry for the delay in this issue, and thank you for your patience.

COMING EVENTS

March 23-31, 1985 April 11-12, 1985 April 25-27, 1985 April 30-May 1, 1985 March 27-30, 1986 APRIL 4-4

Daffodil Festival, Tacoma, Washington RHS Daffodil Show, London, England ADS Convention, King of Prussia, Pennsylvania RHS Late Competition, London, England ADS Convention, Memphis Tennessee

HELP REQUESTED ON 1985 SHOW SCHEDULES

TAG BOURNE, Awards Chairman

The volume of work handled by the Awards Chairman of the Society is heavy and is increasing with each year. In order to reduce the number of times each schedule must be handled, the cooperation of show chairmen, schedule chairmen, and other members of ADS-approved-show committees who correspond with the Awards Chairman is earnestly requested.

1. It is recommended that show chairmen have the latest version of "Procedures for Obtaining Awards from American Daffodil Society, Inc."

2. Drafts of show schedules should be submitted well in advance of the show date to the Awards Chairman IN DUPLICATE. In this manner comments may be written on both copies and one returned to the show committee for final printing. If your show schedule does not have drastic changes from the prior year, submit two copies of the previous year's schedule.

3. If your show is to be a State Show or a Regional Show obtain the approval of your Regional Vice President before you submit your schedule draft and send both together to the Awards Chairman. (Forms are supplied by the Awards Chairman

to Regional Vice Presidents for this purpose.)

4. With the return copy of your schedule you will receive a checklist of things to be done to comply with the Society's procedures for shows offering its awards. Follow this checklist as closely as possible. DO NOT HAVE YOUR SCHEDULE PRINTED UNTIL A REPLY IS RECEIVED FROM THE AWARDS CHAIRMAN.

5. Mail a copy of your FINAL SCHEDULE to the Awards Chairman, who will then mail all ADS Ribbons required, Medal Request Forms, and Show Report Forms in triplicate. A deadline of MARCH 15th has been set for getting schedules to the Awards Chairman.

6. Ribbons only are provided in advance to those shows offering the Silver Quinn and Watrous Medals. Forms, mentioned above, will be supplied for requesting the Quinn or Watrous Medal when the show chairman has determined that a present winner has never won the medal in question in any previous show. A check then accompanies the medal request form. Also, the pertinent ribbon is returned to the Awards Chairman, as only former winners are permitted to keep the Quinn and Watrous Ribbons.

7. Do not have judges sign ADS ribbons prior to judging. It is permissible to sign ribbons given, but if returned for medal to be sent or returned as unused ribbons, this defeats the purpose of the ruling to use these ribbons in future years.

8. During the show, or as soon thereafter as possible, fill in the show report forms. Mail one copy, along with unused ribbons and medal request forms, to the ADS Awards Chairman, WITHIN TWO WEEKS following your show date. Second copy of the show report is sent to your Regional Vice President for her newsletter and the third copy is for your files. Page 20 of the Handbook states that this is the responsibility of the show awards chairman.

Every effort is being made to simplify this job. Any help you can give me will be

more than appreciated.

1985 DAFFODIL SHOW DATES

MRS. HUBERT BOURNE, Awards Chairman

The following is an incomplete list of show dates. If you desire your show to be listed in the March *Journal* please send the information to the Awards Chairman, 1052 Shadyhill Dr., Columbus, OH 43221, by January 10, 1985.

- March 9-10—Corona del Mar, California. Southern California Daffodil Society and the Sherman Foundation at the Sherman Gardens, 2647 East Pacific Coast Hwy. Information: Mrs. A. E. Cameron, 410 South Paseo Estrella, Anaheim, CA 92807
- March 9-10—Clinton, Mississippi. Mississippi State Show. Central Mississippi Daffodil Society at the Hall of Fame, B. C. Rogers Student Center, Mississippi College. Information: Dr. Ted Snazelle, 418 McDonald Drive, Clinton, MS 39056
- March 16-17—Walnut Creek, California. Northern California Daffodil Society at the Heather Farms Garden Center, Ygnacio Valley Road and N. San Carlos Drive. Information: Mr. Bob Spotts, 3934 LaColina Road, El Sobrante, CA 94803.
- March 23-24—La Canada, California. Southern California Daffodil Society at the Descanso Gardens, 1419 Descanso Dr. Information: Mrs. Don Christensen, 1703 Fletcher Avenue, South Pasadena, CA 91030.
- March 23-24—Fortuna, California. Pacific Regional. The Fortuna Garden Club at the Fortuna Monday Club House, Sixth and Main Sts. Information: Mrs. Christine Kemp, P.O. Box 212, Fortuna, CA 95540.
- March 30—Princess Anne, Maryland. Somerset County Garden Club at the Peninsula Bank of Princess Anne. Information: Mrs. Chester Snyder, 48 Beechwood Street, Princess Anne, MD 21853
- March 30-31—Hernando, Mississippi. Southern Regional. The Garden Study Club of Hernando at the National Guard Armory, McCracken Road. Information: Mrs. Barry M. Carter, 4671 Highway 304, Hernando, MS 38632.
- March 30-31—Memphis, Tennessee. The Merry Weeders Garden Club and the Mid-South Daffodil Society at Goldsmith Civic Garden Center, 7050 Cherry Road. Information: Mrs. Fred L. Bradley, 3742 Guernsey Ave., Memphis, TN 38122.
- April 6-7—Hampton, Virginia. Tidewater Daffodil Society at the Hampton Holiday Inn, 1815 West Mercury Blvd. Information: Mr. H. deShields Henley, 115 Conifer Road, Newport News, VA 23606
- April 6-7—Nashville, Tennessee. Middle Tennessee Daffodil Society at Cheekwood, Tennessee Botanical Gardens and Fine Arts Center. Information: Mrs. Richard Frank, Jr., Hill Road, Brentwood, TN 37027.
- April 11-12—Lawrence, Kansas. Countryside, Green Thumb, Lawrence, Prairie Acres, and Meadowlark Garden Clubs and The Daffodil Club at the Arts Center, 9th and Vermont Streets. Information: Mrs. Vernon E. Carlsen, 811 Sunset Drive, Lawrence, KS 66044.
- April 12—Scottsburg, Indiana. Indiana Growers South at the Fire Station. Information: Mrs. Verne Trueblood, RFD 3, Box 187A, Scottsburg, IN 47170.
- April 13-14—Gloucester, Virginia. Garden Club of Gloucester at the Gloucester Intermediate School, Route #17. Information: Mrs. Robert L. Trimpi, Box 672, Goucester Point, VA 23062.

April 13-14—Edgewater, Maryland. London Town Public House and Gardens Show, 839 London Town Road. Information: Mrs. R. Gamble Mann, P.O. Box 176, Edgewater, MD 21037.

April 13-14—Dayton, Ohio. Southwest Ohio Daffodil Society at the Wegerzyn Garden Center, 1301 E. Seibenthaler Avenue. Information: Mrs. William J.

Newill, 10245 Virginia Lee Drive, Dayton, OH 45459.

April 16-17—Louisville, Kentucky. Kentucky Daffodil Society at the Oxmoor Mall, Shelbyville Rd. Information: Mrs. Wynant Dean, 1629 Cowling Ave., Louisville, KY 40205.

April 17-18—Chillicothe, Ohio. Adena Daffodil Society at the Veterans Administration Medical Center, Building No. 9. Information: Mrs. Goldia

Vernia, 525 Seminole Road, Chillicothe, OH 45601.

April 18—Summit, New Jersey. New Jersey Daffodil Society at Calgary Episcopal Church. Information: Mrs. R. Kendall Nottingham, 393 Charlton Ave., South Orange, NJ 07079, or Mrs. David Watts, 30 Wildwood Lane, Summit, NJ 07901.

April 20-21—Washington, D. C. Washington Daffodil Society at the U. S. Botanic Garden Conservatory, Maryland Avenue and First Street, S. W. Information: Miss Delia Bankhead, 489 Arnon Meadow Road, Great Falls, VA 22066.

April 20-21—Columbus, Ohio. Midwest Regional. Central Ohio Daffodil Society at the Upper Arlington Municipal Services Center, 3200 Tremont Road. Information: Mrs. James Dietsch, 5192 Bagley Road, Columbus, OH 43227.

- April 24-25—Baltimore, Maryland. Maryland Daffodil Society at the Brown Memorial Woodbrook Presbyterian Church, 6200 N. Charles at Woodbrook Lane. Information: Ms. Anne Donnell Smith, 8609 Stevenson Road, Stevenson, MD 21153.
- April 25-27—King of Prussia, Pennsylvania. National Show. Delaware Daffodil Society at the Holiday Inn of Valley Forge. Information: Mr. & Mrs. W. R. MacKinney, 535 Woodhaven Road, West Chester, PA 19380.

April 29-30—Nantucket, Massachusetts. Nantucket Garden at the "Meeting House," Harbor House, N. Beach St. Information: Mrs. Malinda Lucas

Geddes, 146 Main St., Nantucket, MA 02554.

April 30—Indianapolis, Indiana. Indiana State Show. Indiana Daffodil Society at First Baptist Church-United Church of Christ, 2420 E. Third Street. Information:

- May 4—Akron, Ohio. Northeast Ohio Daffodil Society at Rolling Acres Mall, 2400 Romig Ave. Information: Jack Ward, 1743 Lafayette Circle, Stow, OH 44224.
- May 4-5—Mansfield, Ohio. Kingwood Daffodil Society at the Exhibit Hall, Kingwood Center, 900 Park Avenue, West. Information: Mr. Charles Applegate, Route 2, Box 163, Perrysville, OH 44864.
- May 10-11—Dublin, New Hampshire. Northern New England Daffodil Society at the Town Hall, Information: Mrs. William Barker, Dublin, New Hampshire 03444 or Mrs. E. H. Eggers, High Shadows, R.F.D. 2, Sharon, NH 03458.

Need a program for your garden club? Rent an ADS slide program.

BOARD OF DIRECTORS MEETING

Portland, Oregon, April 5, 1984

(Abridged from the report of the Secretary.)

Forty-eight directors were present. President Erlandson presided.

Mr. Erlandson expressed thanks to Ms. Howe and her committee for their efforts in planning and holding the convention in Portland. He announced the sudden death of former director, Phil Phillips, at 4:00a.m. on March 24 at his home in New Zealand. He has expressed his sorrow on behalf of the ADS to Mrs. Phillips. He reported receiving a letter of resignation from Second Vice President, Mrs. Wynant Dean, and stated that he had taken no action since the term expired with this meeting.

The minutes of the fall meeting in Paducah were corrected and approved.

EXECUTIVE DIRECTOR Leslie Anderson discussed the ADS Library. It is currently stored in boxes and quite inaccessible. She would like a bookcase, preferably one with glass covers. She will bill directly for *Journal* ads. We have reciprocal ads with some other plant societies. She receives copies of many of their publications which she passes on to Mrs. Gripshover. She is trying to get reciprocal ads with overseas societies. If this does not succeed, she would like to take out overseas memberships for the *Journal* Editor. She stated that the Society is out of *Daffodils to Show and Grow*, and that Dr. Throckmorton will work on a new edition after the RHS's July 1 deadline for new 1984 registrations.

TREASURER Wells Knierim reported income of \$31,470 with expenses of \$26,272. (See

the June, 1984, Journal for Mr. Knierim's complete financial report.)

REGIONAL REPORTS were received from eight of the nine regions.

REPORTS OF STANDING COMMITTEES

AWARDS - Mrs. Bourne reported there would be 41 ADS approved shows in 1984, and that ADS Ribbons were sent to Omagh, Northern Ireland; Sheffield, England; and New Zealand. The Northern Ireland Award which was lost has been replaced. Mrs. Bourne would like to have the names of those people who are both ADS and National Council Judges, and needs all show reports as soon as possible after show dates.

BREEDING AND SELECTION - Dr. Bender announced the Dutch treat Saturday

morning Hybridizers' Breakfast, and listed the items on the agenda.

CLASSIFICATION - A report from Mrs. Anthony stated that Cricket has been changed to 5 Y-Y, and Amber Castle and Cairngorm should be coded 2 Y-WWP. Mr. Duncan stated the cup never really changes to white in Ireland, while in this country many people claim never to have seen the pink rim. Judges will have to use common sense when judging such flowers that do not conform to the code exactly.

DATA BANK - Dr. Throckmorton stated that there are now over 12,000 daffodils listed in the Data Bank. It has become increasingly more difficult to get the new ones in, as material is very slow in coming from the RHS. However, the RHS has now named a new person [Kate Donald] to be in charge of daffodil business, and it is hoped information will flow more smoothly. Daffodils to Show and Grow will be updated in late 1984 or early 1985. He gave

special thanks to Ruth Pardue for all her help on the committee.

EDITOR OF JOURNAL - Our *Journal* has won the National Council of State Garden Clubs Awards for the past four years. Mrs. Gripshover stated that we continue to publish 64-page issues of the *Journal* and have developed a working arrangement with the printer which permits mailing by the first day of the month indicated on the cover. With the March issue, mailing responsibility reverted back to the Publications Committee. She thanked authors and photographers who have contributed in the past and asked for new authors.

HEALTH AND CULTURE - Dr. Snazelle reported on his research dealing with the search for alternative fungicides for benomyl in the treatment of basal rot. He has used in vitro testing of several fungicides and found a number effective. With continuing ADS support he will start field trials this fall using the basal-rot-susceptible cultivar Golden

Harvest and those agents which have proven effective in the laboratory.

JUDGES - Mrs. Barnes reported a total of 258 Accredited Judges, 5 Accredited Judges Retired, and 39 Student Judges.

LIBRARY - Mrs. Bloomer stated that a list of all books in the ADS library had been published in the *Journal* within the past few years. She has received no new material to be added this year and has received no requests for information. Since the physical library has been moved from Tyner, NC, to the capable hands of the new Executive Director, she is resigning now. She has enjoyed serving as ADS Library Chairman.

MEMBERSHIP - Mrs. Armstrong said that she had reported a membership of 1689, down 15 from the fall, but 37 more than in February of 1983. We gained 259 new members, but lost

222 old ones.

MINIATURES - Mrs. Macneale reported that after publication of the call for help in locating lost miniatures, Snug, Merrychild, and Sneezy have been reported. Mrs. Macneale is resigning after seven years as Chairman, and thanked her committee for its help and

encouragement.

PHOTOGRAPHY - Mrs. Shryoc reported that the Daffodil Primer was the most popular slide program last year. Sixty-seven rentals were recorded for the year as compared with thirty-eight for the preceding year. Plans are being made to upgrade some of the series, and perhaps compile a set on American hybridizers as well as one on English and Irish hybridizers.

PUBLICATIONS - Mrs. Cartwright's report indicated that she had written to advertisers. She asked the Board's opinion on printing in booklet form Dr. Snazelle's series

of articles on pest and diseases.

PUBLIC RELATIONS - Mrs. Howard's report stated that she had sent letters to all show chairmen giving tips on writing news releases for local papers and TV stations and asking for new ideas and ways to publicize a show. Responses have been good, and she plans to send out a second letter incorporating the ideas she received.

REGISTRATION - Mrs. Anderson will have a report in the fall after 1984 registrations are

complete.

ROUND ROBINS - Mr. Etheredge reported a spurt of interest in the Hybridizer's Robin. Seven new members have been added and a figure "8" formed so that information is disseminated to all members. He is still seeking members for possible Tazetta, Jonquil, and Cyclamineus Robins.

SCHOOLS - Mrs. Liggett reported on refreshers and schools scheduled for 1984.

SHOW REPORTER - Mrs. McKenzie had no report at this time.

TEST GARDENS - Mrs. Pardue stated that twenty test, display, and trial gardens are registered with the ADS Test Garden Chairman, from Minnesota and Rhode Island in the North to Colorado in the West and Arkansas and Mississippi in the South. Reports have been received from eight of these gardens. Anyone with correctly named, blooming sized, healthy bulbs to donate should contact the Test Garden Chairman. Mrs. Link explained the status of the Wister Award. She said that the bulb to be tested this spring is Accent. Stratosphere was new for last spring. Thiry-three people will test the cultivars in all parts of the country. At the end of three years, the committee will decide whether or not to put the stamp of approval on that cultivar.

UNFINISHED BUSINESS

RESTRUCTURING OF RESEARCH AND EDUCATION COMMITTEE - Following the Fall Board Meeting in which the Executive Committee was directed to investigate and possibly restructure the Research and Education Committee, Mr. Erlandson polled the Executive Committee on the following recommendation on October 25, 1983:

In response to the Research Motion passed during the 1983 Board Meeting in Paducah, the Executive Committee recommends that the Board of Directors, by resolution, combine the Research and Education Committee with Health and Culture Committee to form one committee to be known as the Research, Health, and Culture Committee. The change will be effective at the close of the 1984 Annual Meeting.

He received five "yes" votes, zero "no" votes, and two abstentions. It was moved and seconded to accept the recommendation. Motion carried.

NEW BUSINESS

CONVENTION SURPLUSES - Mr. Knierim asked if the Williamsburg convention surplus should be added to research and education. After much discussion, it was decided to delay any action until the Saturday Board Meeting, Mr. Erlandson gave thanks to the Board and Executive Committee for their cooperation during his tenure. He then adjourned the meeting.

ANNUAL MEMBERSHIP MEETING, April 6, 1984

Mr. Erlandson called the meeting to order and thanked Ms. Howe and her committee for organizing a fine convention and show. It was moved and seconded to dispense with the reading of the minutes from the last annual meeting. Motion carried.

Mr. Knierim reported that the Society is "in very good financial shape."

Executive Director Leslie Anderson told of her interesting year since assuming her job and thanked her clerk, Martha Anderson, and the Ticknors for their help in getting settled in her new position, and thanked everyone for their cooperation.

President Erlandson stated that Monday, April 9, would be the 30th birthday of the ADS. (See the June, 1984, *Journal* for his complete report.) He thanked all for a job well done.

Mrs. W. R. Mackinney, Nominating Committee Chairman, presented the slate of nominees (see June, *Journal*) who were unanimously elected.

BOARD OF DIRECTORS MEETING, April 7, 1984

Forty-eight directors were present, with Mrs. Goethe Link, President, presiding. The Board appointed Ms. Howe and Mr. Knierim as Secretary and Treasurer. Mrs. Link then introduced each of the elected Board members and the Committee Chairman which she wished to appoint. (see June, Journal). Mrs. Link asked approval for the following appointments to the Executive Committee; Mrs. Link, Dr. Snazelle, Mrs. Andersen, Ms. Howe, Mr. Knierim, Mr. Erlandson, and Mrs. P.R. Moore, Jr. For the Nominating Committee, she asked approval of the following: Mrs. Jesse Cox, Arkansas, Chairman; Mrs. Quentin Erlandson, Maryland; Mr. Jack Romine, California; Mrs. Wayne Anderson, Mississispip; and Mrs. Johannes R. Krahmer, Delaware. All appointments were approved.

UNFINISHED BUSINESS

CONVENTION SURPLUS - Mr. Knierim moved to leave the surplus as reported in the meeting of April 5. Seconded and carried. ROSTER - Mrs. Gripshover moved to remove the roster from the *Journal*. Carried. After much discussion, it was moved and seconded to print and mail the roster free each year to all members. Motion carried.

DAFFODILS TO SHOW AND GROW. The Board approved printing a revised edition. GROUP LIFE MEMBERSHIPS - Mr. Erlandson read his letter of 11/28/83, to the Executive Director and Executive Committee re the existence of group life memberships in the ADS. The letter cites references in the By-Laws which lead Mr. Erlandson to believe that "in perpetuity" memberships should not be permitted. In the letter he directed the Executive Director not to accept any further group life memberships until further notice; he felt those current life memberships should remain. It was so moved, seconded, and carried. It was moved and seconded to amend the By-Laws to clarify the situation unquestionably.

AWARDS · Mrs. Bourne reported that Brent Heath wished to offer a \$25 gift certificate as an award in memory of Amy Mitsch. It was moved and seconded to accept the offer. After much discussion, the motion was tabled.

TEST GARDENS - Mrs. Link proposed combining the Test Garden and Wister Award responsibilities. Approved.

FALL BOARD MEETING - About twenty Board members will participate in the New Zealand World Daffodil Convention this fall. By-Laws do not require a fall board meeting. It was moved to dispense with the Fall Board Meeting. Approved.

SPECIAL PUBLICATION - It was moved and seconded that a special publication containing all of Dr. Snazelle's articles on pests and diseases be published and sent to all members. After much discussion, the motion was amended to place this matter in the hands of the Research, Health, and Culture Committee and the Publications Committee for a recommendation at the next Board Meeting. Carried.

The meeting was adjourned.



Few things can compare to the thrill I experienced when I saw the flower of Magician open for the first time in my garden I watched this cultivar ddily from the moment it pushed through the ground. When I discovered it was going to have three flowering stems I was overjoyed.

The moment the spathe split and the sepals began to unfurlow the first bud Is saw the most magnificent color I've ever seen on a daffodil corona. The color was there when the sepals were barely parted. In did not have to wait 2, 4 or 6 days to see the eventual richness of this hue and it remained constant for 15 days.

Magician Gene Bauer Running Springs California

Grant Mitsch has written a completely accurate description of his creation in the Mitsch / Havens catalog.

The plant is robust and the large flowers imbued with heavy substance. The entire cup, inside and outside, from rim to juncture with the petals is a color unlike any other in nature. It is a clean, clear red orange of strong intensity. The red orange hue is as pure in this cultivar as is the yellow hue in Festivity. It is a distinctive and almost unbelievable color. What an appropriate name Mr. Mitsch has chosen to give it, magician.

CONVENTION 1985

BETTY P. KRAHMER, Wilmington, Delaware

Over two centuries ago, General George Washington and his troops spent a long, cold, wet winter at Valley Forge. April 25-27, 1985, the ADS will spend a short and (we hope) warm, dry period in that same area. The ADS Convention and Show will be held at the Holiday Inn of Valley Forge in King of Prussia, Pennslyvania. (To reach it by air, one uses the Philadelphia Airport.) Under the chairmanship of Mr. & Mrs. William R. Mackinney, ADS members from the Northeast Region are planning an exciting convention.

As you will note on the registration from, the Inn offers a variety of rooms. It also has excellent meeting rooms, and the show itself will be staged in the spacious area around the indoor swimming pool. The location is near the Valley Forge National Park and is within walking distance of what is termed the 'Nation's Largest Shopping Complex,' containing six department stores and 250 specialty shops. A bit further afield are Philadelphia and the whole of the Delaware Valley

which are rich in history and culture.

However, there are such exciting events planned for the Convention, one will have little time to spend money at the shops. Show blooms may be entered starting Wednesday afternoon and continuing to Thursday morning. After the judging, the Show will be open Thursday afternoon and during the day on Friday. Thursday evening, we will have our refreshment hour in the show area, followed by the Awards Dinner and ADS Annual Meeting.

Friday will offer an exciting day of symposiums to appeal to all interests. The subjects will include daffodil disease, staging a show, tissue culture, and judging a show. A portion of this day will be designated as a Judges Refresher Course. One will register for the latter during the convention. In the evening, there will be a

banquet, after which Sir Frank Harrison of Ballydorn will address us.

The tour on Saturday should be a highlight. We will visit both Longwood Gardens and Winterthur Museum and Gardens. Lunch will be at Longwood Gardens. One of the lovely aspects about these famous gardens is if the weather should be inclement (heaven forbid), Longwood offers a spectacular conservatory and Winterthur a world renowned Museum. Further, we have tickets for the 'tram' at Winterthur so all can take a 30 minute guided tour through the gardens without a complaint of weary feet. Our final banquet will be followed by an auction of items desired by daffodil growers. There will be a special surprise (?) auctioneer.

The New Jersey Daffodil Society will be presenting a lovely boutique with very tempting items at various times during the convention. They will also conduct a

special raffle of a Boehm bird.

It will be a busy time! In this rich historic area, some of you may wish to come early or stay late. For general information you can contact:

Philadelphia Visitor's Center 16th and JFK Blvd. Philadelphia, PA 19102

Tele: 215-568-6599

Valley Forge Country Visitor's Bureau

Box 311

Norristown, PA 19404

Tele: 216-568-6599

Greater Wilmington Visitor's Bureau

Box 111

Wilmington, DE 19899

Tele: 302-652-4088



Spring by the lake at Longwood Gardens.

REGISTRATION FORM

A D S CONVENTION, APRIL 25-27, 1985

HOLIDAY INN, KING OF PRUSSIA, PENNSYLVANIA

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THE DAFFODIL SOCIETY



was established in Britain in 1898 to cater for the needs of all daffodil enthusiasts and now has members in all the countries where daffodils are grown seriously.

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Hon. Treasurer, Ivor Fox, 44 Wargrave Road, Twyford, Reading, Berks., England.

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U. S. REGISTRATIONS IN 1984

Reported by MRS. KENNETH B. ANDERSON, Registration Chairman

American registrants of new daffodils and their registrations:

Frey, Eileen; Canby, OR; Bright Tomorrow, Highpoint.

Haycock, Stephen P.; Annandale, VA; Just Ruth.

Jerrell, Robert E.; Orinda, CA; Mae Gibson Foster, Eileen Squires.

Keasey, Gilman; Corvallis, OR; Aquila Lyda.

Mitsch-Havens; Hubbard, OR; Fire Rim, Pink Frost, Radiant Gem, Ringing Bells, Sun Pink.

Mitsch, Grant E.; Canby, OR; Berceuse, Best Regards, Cedarbird, Concertina, Drongo, Desert Bells, Macushla, Mission Bells, Occasionally, Oregon Music, Pink Swan, Plumeleteer, Spring Morn, Starfall, Thrasher.

Romine, Jack S.; Walnut Creek, CA; Little Soldier, Old Smoothie.

Yerger, Mrs. Merton S.; Princess Anne, MD; Gold Target, Green Pool, Green Spring, Perdita's Pride, Perdita's Prince, Sealight, Secret Circle, Sweet Delight, Sweet Dream, Sweet Surprise.

Following these new registrations will be a list of registrations which were registered in our 1983 A.D.S. *Journal*, but which, because of a changeover of personnel in the Royal Horticultural Society in 1983, were not registered in the R.H.S. "Newly Registered Cultivar Names." Instead these now appear in their 1984 R.H.S. list as if registered in 1984, and will now be officially 1984 registrations.

NEW REGISTRATIONS

Measurements given are: class, color code, seedling number, seed parent, pollen parent, length of perianth segments (P. segs) and color, length of corona and color (C. lgth), and bloom season.



AQUILA LYDA (Keasey) 2 W-P; (Abalone × Carita); P. segs. white; corona, soft pink; midseason.

BERCEUSE (Mitsch) 2 W-P; KK8/5; [(W18/3: Q52/1 × Rose Caprice) × (C7/10: Carita × Accent)]; P. segs. 43 mm, white; C. lgth. 35 mm, apricot pink; midseason.

BEST REGARDS (Mitsch) 1 YW-Y; MM 14/1; (Arctic Gold × Daydream); P. segs. 40 mm, golden yellow with white halo; C. lgth. 40 mm, deeper yellow; midseason.

BRIGHT TOMORROW (Frey) 7 W-P; QEE 14/41; (F31/5 × N. jonquilla); P. segs. 30 mm, white with shades of pink; C. lgth. 18 mm, light pink outside, deep pink inside.

CEDARBIRD (Mitsch) 2 W-P; LL39/4; [(F34/3:Precedent × Debutante) × Space Ship]; P. segs. 40 mm, white; C. lgth. 31 mm, silvery pink; late midseason.

CONCERTINA (Mitsch) 2 W-P; KK25/5; (B37/11: Precedent × Accent) × F67/1: sister of Space Ship; P. segs. 47 mm, white with suggestions of pink; C. lgth. 28 mm, soft rose pink; late midseason.

DESERT BELLS (Mitsch) 7 W-Y; II134/1; (Quick Step × N. juncifolious) P. segs. 18 mm, opens yellow, fades to white; C. lgth. 11 mm, yellow fades to lemon; late.

DRONGO (Mitsch) 4 W-WY; LL66/20; (Gay Time × Stainless); P. segs. 37 mm, white; C. segs. white and pale lemon; late.

EILEEN SQUIRES (Jerrell) 2 W-GPP; 69/28-1; (Precedent × Dorwin sdlg. 4-95); P. segs. 36 mm, white; C. lgth. 17 mm, deep raspberry toned pink; midseason.

FIRE RIM (Mitsch-Havens) 2 W-GYR; HH95/3; (Tigard × Snowgem); P. segs 37 mm, white; C. lgth. 23 mm, green eye, yellow midzone, and bright orange-red rim; early midseason.

GOLD TARGET (Yerger) 9 W-GOR; 73B3; (Lights Out × Perdita); P. segs. 28 mm, white; C. lgth. 5mm, green eye, orange midzone, red rim; late midseason.

- GREEN POOL (Yerger) 9 W-GGO; 73B4 (Lights Out × Perdita); P. segs. 26 mm, white; C. lgth. 3mm, green eye, chartreuse midzone, orange band rim; late midseason.
- GREEN SPRING (Yerger) 9 W-GYR; 76J-14; (Sea Green o.p.); P. segs. 25 mm, white; C. lgth. 3mm, green eye, wide greenish yellow midzone; wide red rim, hairline red edge; late midseason.

HIGH POINT (Frey) 2 Y-Y; JEE 8/10; (Playboy × Chiloquin); P. segs. 45 mm, yellow; C. lgth. 30 mm, apricot yellow center; midseason.

JUST RUTH (Haycock) 2 W-GWO; AW-WP-1; (Accent ×?); P. segs. 36 mm, white; C. lgth. 20 mm, green eye, near white to salmon pink at rim; midseason.

LITTLE SOLDIER (Romine) 12 Y-Y; #73-1; (N. bulbocodium obesus × Chemawa); P. segs. 20 mm, yellow; C. lgth. 20 mm, yellow; early midseason.

MACUSHLA (Mitsch) 2 W-P; LL13/1; (Precedent × Space Ship); P. segs. 46 mm, white; C. lgth. 25 mm, soft pink with deeper pink frill; late midseason.

MAE GIBSON FOSTER (Jerrell) 2W-GWP; 69-28-2 [Precedent × Dorwin sdlg. Y-95: (Melody Lane × Rima)]; P. segs. 37 mm, white; C. lgth. 14 mm, green eye, white midzone and broad red-pink band; midseason.

MISSION BELLS (Mitsch) 5 W-W; GO27/1; (Silver Bells o.p.); P. segs 30 mm, ivory white; C. lqth. 29 mm, ivory white; late midseason.

OCCASIONALLY (Mitsch) 2 W-Y; H 122/4; (Wahkeena × Y60/2); P. segs. 51 mm, white; C. Igth. 49 mm, almost a trumpet, lemon; midseason.

OLD SMOOTHIE (Romine) 1 Y-Y; #72-3; (Gold Court × Honeybird); P. segs. 35 mm, yellow; C. lgth. 33 mm, yellow; early.

OREGON MUSIC (Mitsch) 2 W-W; W65/2/4; [Easter Moon × (Broughshane × sdlg.)]; P. segs. 41 mm, white; C. lgth.31mm, white; late mid-season.

PERDITA'S PRIDE (Yerger) 9 W-OOR; 73B-6 (Lights Out × Perdita); P. segs. 32 mm, white; C. lgth. 4 mm, orange eye, orange midzone, outer rim red-orange; late.

PERDITA'S PRINCE (Yerger) 9 W-OOR; 73B-2 (Lights Out × Perdita); P. segs. 28 mm, white; C. lgth. 3 mm, orange eye, orange midzone, red rim; late.

PINK FROST (Mitsch-Havens) 2 W-P; Q52/1; (Lough Maree × Radiation) P. segs. 45 mm, milk white; C. lgth. 41 mm, light pink with hint of lavender; midseason. PINK SWAN (Mitsch) 2 W-P; F27/1; (Mrs. O. Ronalds × Debutante); P. segs. 45

mm, white; C. Igth. 30 mm, pink; midseason.

rumpet	Large Cup	Small Cyx	Double	Triandrus	Ochmintus
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PLUMELETEER (Mitsch) 6 W-P; KK105/6; (Y36/2: [Mabel Taylor × (Interim × Rima)] × N. cyclamineus); P. segs. 33 mm, milk white; C. lgth. 31 mm, apricot pink, lighter near edge; early midseason.

RADIANT GEM (Mitsch-Havens) 8 Y-R; JJ77/5; (Matador × N. jonquilla) P. segs. 25 mm, golden yellow; C. lgth. 6 mm, bright orange red; late midseason.

RINGING BELLS (Mitsch-Havens) 5 W-W; C52/3; (Quick Step × N. triandrus albus) P. segs. 28 mm, white; C. lgth. 12 mm, white; late.

SEALIGHT (Yerger) 9 W-GGO; 73 A-1; (Lights Out × Sea Green); P. segs. 28 mm, white; C. lgth. 2 mm, green eye, greenish yellow midzone, 2 mm wide orange band; late.

SECRET CIRCLE (Yerger) 9 W-GYR; 74 C-1-1; (Poeticus sdlg. × Red Rim) P. segs. 25 mm, white; C. lgth. 1.2 mm, green eye, wide yellow midzone, narrow red band with serrated edge; midseason.

SPRING MORN (Mitsch) 2 Y-YPP; HO 1/8; (Euphony o.p.); P. segs. 35 mm, soft lemon yellow; C. lgth. 28 mm, lemon overlaid pink; late midseason.

STAR FALL (Mitsch) 2 W-P; KK22/3; (A491: ((Green Island × ((White Sentinel × Mrs. Backhouse) × Wild Rose)) × Carita) × Eclat). P. segs. 41mm, white; C. lgth. 22 mm, apricot pink; late midseason.

SUN PINK (Mitsch-Havens) 2 Y-WPP; F25/10; (Leonaine × Daydream); P. Segs. 35 mm, deep lemon yellow; C. lgth. 25 mm, white throat, pink cup; deeper coloring than most pink-yellows; late midseason.

SWEET DELIGHT (Yerger) 9 W-GYR; 74 B-1; (Poeticus sdlg. × Milan); P. segs. 30 mm, white;, C. lgth. 1 mm, green eye zone, yellow midzone, red band edge zone with picot edge; early midseason.

SWEET DREAM (Yerger) 9 W-GYO; 74 B-3-2; (Poeticus sdlg. × Milan); P. segs. 26 mm, white; C. lgth., 1 mm, green eye zone; yellow midzone, wide orange rim on the saucer like disc; early midseason.

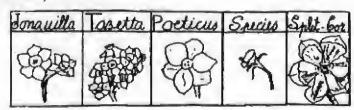
SWEET SURPRISE (Yerger) 9 W-GYO; 74 B-3-4; (Poeticus sdlg. × Milan); P. segs. 28 mm, white; C. lgth. 2 mm, green eye zone, large yellow midzone, very thin orange rim; early midseason.

THRASHER (Mitsch) 2 W.P; LL39/5: [F343: (Precedent × Debutante) × Space Ship]; P. segs. 47 mm, white; C. lgth. 28 mm, rose pink; late midseason.

FORMER A.D.S. REGISTRATIONS NEWLY REGISTERED IN 1984 by R.H.S.

ANGKOR (Mitsch) 4 Y-Y
ARRAY (Evans) 9 W-GYR
ASTRODOME (Mitsch) 2 W-PPW
EARLY PEARL (Welch) 8 W-GWW
ESPERANZA (Roese) 2 Y-R
1982
GINGER LEE (Zinkowski) 7 Y-O
1981
GOLDEN CUPS (Welch) 8 W-Y
MARABOU (Evans) 4 W-P
MELODIOUS (Mitsch) 6 Y-Y
NIGHT MUSIC (Mitsch) 4 W-WWP
OUZEL (Mitsch) 6 W-W
PORTRAIT (Evans) 2 W-P
REDSTONE (Mitsch) 2 YW-P

RIOT (Mitsch) 2 W-P
SANCTION (Mitsch) 2 W-P
SHORTCAKE (Evans) 2 W-P
SHRIKE (Mitsch) 11 W-P
SUNGEM (Mitsch) 2 WY-W
SWAMPFOX (Pannill) 2 Y-O
name change from AMARETTO
1982
TAKAHE (Mitsch) 4 Y-O
WARBLER (Mitsch) 6 Y-Y
WOODSTAR (Mitsch) 5 Y-YW
WINSOME WINIFRED (Koopowitz)
1982
YOPRIM (Anderson) 8 W-Y



ROBIN NOTES

OTIS ETHEREDGE, Round Robin Chairman

Unfortunately, the sour notes rang from all Robins concerning the disastrous cold of last winter. The very early extreme weather came upon many plantings before roots had become well established and before the comforting snow blanket had fallen.

Several letters contained the terrible news of losses into the several thousands of dollars. This became doubly sad especially in the cases of the many miniatures lost which will be for all practical purposes irreplaceable. Dr. Bill Bender reported that it was the worst damage that he had seen in twenty-five years of growing daffodils. He said that even established plantings were severely damaged. For those of us who were told and believed that daffodils that have put down roots won't freeze, this was an eye-opener.

However, as in most unfortunate happenings, there were some compensations. Color and substance were excellent, and many parts of the South experienced an unusually long and cool spring. Thus, despite it all, many Robin members reported excellent successes in exhibiting named cultivars as well as seedlings.

Robins seem to develop topic personalities with the Men's Robin containing a wealth of horticultural information and the Miniature Robin sorting out the difficult matters of identification, propagation and purchase.

The Poet Robin seemed to overlap its sister Robin with a great deal of interest in several members' miniature poet seedlings. Because of these new miniature poets, twin-scaling small bulbs generated much interest.

The burgeoning membership in the Hybridizers' Robin indicates a true revival of interest in that wonderful hobby or with some of us practically a vocation. Robert Jerrell, a former Robin member, rejoined and reported a messy seedling patch after several years of neglect. Bob's good news was that he has several seedlings that he plans to register—perhaps one 2 Y·R and at least two 2 W·P seedlings. The Heath's reported on a 7 W·O from Avenger × N. jonquilla. Ted Snazelle and Dr. Tom Throckmorton engaged in a discussion of the merits of Benlate. Lucky indeed is George Morrill who reported no trouble with basal rot. One learns so much from this distinguished group including the fact, not surprisingly, that they often disagree. The discussion of Carlton and Golden Aura as parents certainly indicated this. No need to elaborate on this. We will just have to wait and see for ourselves whta kind of parents these two distinguished cultivars turn out to be. As of now it seems that Golden Aura is the leader, but who knows what next year's seedlings may prove to be?

HERE AND THERE

Our Jim Wells is a busy fellow. He has recently completed a revision of his book on plant propagation which is the manual for the nursery industry and widely used in horticultural classrooms; and he has been the recipient of The Gold Medal of the Men's Garden Club of America for his work in the propagation of rhododendrons. The New York Times Leisure Section of September 9 included his article, "A Host of Golden Daffodils' Needs Advance Planning," which gave instructions for naturalizing our favorite flower.

Horticultural and humanitarian circles have lost a loyal friend and staunch advocate with the death in September of Lois Burpee. While not an ADS member, she loved daffodils, as evidenced by the thousands which were naturalized along lanes and in meadows of Fordhook Farm.

PERSONALITY PROFILE



W.J. DUNLOP

KATE READE, Broughshane,
Northern Ireland
(from the Newsletter of the Northern Ireland Daffodil Group, April, 1984)

When I was asked to write a profile on Willie Dunlop, I telephoned him to ask if I could go and see him to take notes. Unfortunately he was not feeling well enough for visitors that day but very kindly he typed out some notes which I have included in his own words.

SOME DAFFODIL RECOLLECTIONS

W. J. DUNLOP

I was born in Ballymena where we had a fairly large garden and in addition the use of my aunt's which adjoined it, both gardens being worked as one.

The soil was a rich medium loam, well drained and facing south, in other words

ideal for daffodils, which grew like weeds.

As a lad I was mostly interested in growing florists' flowers to a fairly high standard for exhibition at the September Show of the Ballymena Horticultural Society, which was one of the best in Ulster. The Society decided to start a spring show mainly for daffodils, being inspired by the very successful show held by Coleraine Society. As a result I caught the "yellow fever" and began to develop my collection and started to exhibit at Ballymena and Coleraine. About this time I had met Guy Wilson and we became close friends up to the time of his death. I think there was hardly a day we were not speaking to each other, either in person or by telephone. He never seemed to tire talking about daffodils. By this I mean every aspect of daffodil cultivation, and the personalities of the then daffodil world including such well known raisers as Engleheart, P.D. and J.C. Williams, not forgetting his old friend Brodie of Brodie whom he held in very high esteem.

As a result I received a very thorough grounding in the early development of the

flower which made possible the progress of later breeders.

When I began growing, Beersheba was the last word in white trumpets, being bred from the lovely little White Knight, but it was very small by today's standards. Mrs. Krelage and Beersheba gave Samite and Ardclinis. Guy thought Samite the better flower, but of the two Ardclinis was whiter and became more popular.

This brings to mind a story which illustrated the importance of proportion and classification. When Guy returned from the daffodil show in London he found Samite in top form and decided to take some flowers to the next fortnightly show in London to be put up for an award of merit, which it duly received, but at a price. Samite was registered as a trumpet, which by appearance it was; but when measured by the Secretary of the Narcissus Committee it was found to be a "Giant Leedsii" in the classification then used which today would be 2 W-W.

When he returned home, Guy called to see me in a frightful rage about the change in classification, storming at Mr. A. Simmonds (the Secretary of the Committee) who was very efficient in everything he did. The idea of Simmonds

telling Guy that he did not know how to classify a flower that he had raised was just too much. The argument continued for some time, and demands arose for other flowers to be measured, a job much to Simmonds's liking. The results were startling. A number of cultivars like Slemish were certainly 2 W-Ws by measurement. In fact Slemish looked a 2 W-W although of trumpet breeding (Findhorn and Beersheba). At this time it was probably considered the best white trumpet, at its best a superb quality flower, though rather soft and doing best in pots. It made a very poor bulb; and as it was quite impossible to get good bulbs for sending out in orders, it was soon dropped. Cantatrice (still as lovely as ever) contained a number of flowers which were not full trumpets, but I always considered it one of the best of the Wilson flowers.

This leads to the general question of form, proportion, and quality in the flowers of today and my reasons for dealing with the problems of earlier days. Good texture and smooth form are basic necessities in a good flower and proportion is very important, too, but clarity of color and freedom from muddiness are first essentials. In a yellow-petalled flower of whatever division, clear maximus gold is the ideal; and one remembers the sensation Crocus and Trenoon made in their heyday. This color has been inherited by many of the modern yellows and really set the standard for color.

Whites and white-colored flowers must be really white and free from muddiness. The latter fault was inherited from the old Will Scarlett which was in many pedigrees at this time. This weakness has really only been overcome in recent years.

These notes, so kindly sent by Willie, show how different things were when he started breeding. Of those early flowers he mentioned, probably only Cantatrice would win in shows today.

It must have been a hard decision for Willie to make, between continuing in a very prosperous business in Ballymena and taking on the life of real hard work and small financial gain, which is the lot of a daffodil breeder; but he did what he was interested in, and moved out to Broughshane where he bought a farm and started his daffodil business. It was a daunting task, and without a very wonderful hardworking wife it would have been difficult to succeed; but succeed he did, and many of his daffodils are known all over the world. One of his most famous flowers is Newcastle, a very strongly contrasted 1 W-Y, which has caused heartache to so many would-be cup winners. It is so difficult to produce at a show at its best because it is so big. It is hard to pack, and needs perfect conditions to open up really flat and smooth; but has still managed to achieve best bloom at the R.H.S. on several occasions.

Encouraged by Guy Wilson, Willie started to exhibit trade stands in London where he achieved gold medals in 1949 and 1950, and in 1961 he was awarded the Peter Barr Memorial Cup for his work in breeding and exhibiting daffodils.

I first saw Willie at Ballymena station unpacking boxes returning from some show. I was struck by his great height and enquired who he was. I was told that this was the "Mr. Dunlop who grew daffodils."

For many years Willie judged the classes in Ballymena Show. I am sure he could ill afford the time as he was in the cut flower trade as well as breeding and selling bulbs all over the world.

He later realized that he could not manage the digging and planting of so many bulbs by hand, so he abandoned the raised bed method and grew his bulbs in drills enabling him to use more machinery. His two sons, Robin and John, had just started to be a real help to him when Robin developed an allergy to narcissus which prevented him from handling them at all.

I am sure this was a disappointment; but somehow the work got done, and he still managed to produce a trade stand in London in 1972 where he was helped by

another Broughshane man, Alec Calderwood, who was running a florists in Stranraer. It was shortly after this that he realized he could not cope with the huge number of bulbs he was then handling; so he sold most of his stocks, keeping some for his own interest and for breeding. Tragically this work was cut short when he had a fall resulting in a fractured femur which refused to mend. He was in hospital for a very long time. It was particularly sad for him as it was just at this time that the Steering Committee for the Northern Ireland Daffodil Group was formed to promote interest in daffodils in Northern Ireland and he was the first Chairman. He has suffered a lot of ill health since his fall and does not see a lot of visitors, but I always enjoy his humorous stories about the old times with Guy Wilson and Lionel Richardson.

When we were starting in business, he gave us a lot of encouragement and advice. He was very afraid of the dreaded eelworm, and it was he who impressed on us never to grow bought in cultivars near the main stocks, and the importance of hot water treatment. I always found him tremendously kind and helpful and with a great sense of humor and am sad that ill health prevents him from getting out more. Once when he was looking at our bulbs in the loft where we used to store them, he hit his head on the low door frame. It sounded very painful, but he just pushed his cap down over the bump and said nothing. The next day I phoned his wife and said, "Is Willie's head all right?" She was a bit shaken, not having been told of the incident, and replied, "Why, has he forgotten something?"

There are many entertaining stories about Willie Dunlop, but this should be an article about his tremendous achievements in breeding daffodils with clear colors and good form. In 1963 he came second in the Engleheart Cup. In his group were Enniskillen, Glenwherry, Armagh, and Newcastle, all still good flowers twenty years later. Willie Dunlop has not named too many—the cultivars he named have lasting quality.

The names of Ulster towns and villages are well represented by his flowers, good ambassadors wherever in the world daffodils are grown.

My last thought is of Willie among his flowers some years ago in his greenhouse preparing for the London Show, catching bumble bees in his cap to prevent them from eating holes in the petals. He has left his mark in daffodil breeding; and Dunlop flowers are still in great demand, which must be a pleasure to him.





GRIPSHO

Left, Newcastle; right, Woodvale





LETTERS

Knoxville, TN 37919 October 1, 1984

Dear Mr. Granville Hall,

In answer to your "Beginner's Corner" letter to the Editor: I have personally observed four instances of stray seedlings which germinated, grew on their own, and subsequently bloomed.

These occurred in the plantings of the late Bruce Carter of Knoxville, who grew acres of daffodils for the local cut flower trade. Bruce pointed them out to me, and I agreed with him that they were seedlings which had self-sowed and later bloomed. He was surprised that it had not happened more often!

His soil was ideally suited to growing daffodils, and had abundant soil-water,

too.

Yours truly, Frank B. Galyon, M.D.

Oregon City, Oregon September 28, 1984

Dear Mary Lou,

I would like to answer Granville Hall's letter on pp.52-53 of the September Journal.

Several years ago, I had a seedpod fall over and the seeds germinated. I did not notice them until the second year when I dug them up and discarded them. I have no doubt that if I had left them in place that eventually one or more would have bloomed.

I do know that the Havens go through their fields and pick off any open pollinated pods so that no seed will grow, eventually bloom, resulting in rogues among their named cultivars.

Sincerely, George E. Morrill

THE DAFFODIL CITY

THEODORE E. SNAZELLE, PH. D. Mississippi College, Clinton, Mississippi

On a college campus, the faculty lounge is generally thought to be the center for seditious thought, irreverence, and other questionable activities. Rumor had it that the administration placed a 'bug' in the faculty lounge of the college where I teach but had to turn it off when they realized that their doubts about the faculty proved to be worse than anyone had previously thought. Well, of course, that is only rumor (I think?). Despite the questionable character of some of the daily visitors and despite the rumors of unsavory conversations among those present, sometimes the conversations really are intellectual or educational in nature. Such a conversation developed one day a year or so ago when I was being questioned about my efforts to create the Mississippi College Daffodil Garden. Dr. Bert Thompson, Dean of the School of Education and formerly the Superintendent of Schools in Greenville, Mississippi, asked, "Did you know that one time there was a man who wanted to make Greenville known as 'The Daffodil City'?" I asked Dr.

Thompson to tell me more. He said that the proponent of 'The Daffodil City' idea was none other than the late E. E. Bass who was Superintendent of Schools in Greenville from 1884-1932. Dr. Thompson told me that the story about the efforts of Mr. Bass to make Greenville, Mississippi, known as 'The Daffodil City' could be found in his doctoral dissertation on the history of Greenville, Mississippi, Public Schools from 1884-1932. In Dr. Thompson's dissertation, he quotes the story of Mr. Bass's dream to make Greenville 'The Daffodil City;' this story was originally published in the high school newspaper, The Pica, in November, 1932, by a student by the name of Gale Nole:

Ever striving for improvement in the beauty of the city; Mr. Bass tried to get the citizens to plant daffodils throughout Greenville, in order that people may say, "Let's go to Greenville to see the daffodils," just as they go to Mobile to see azaleas in the spring. I hope that someday we may be able to carry out this wish. In the spring of every year when the daffodils were blooming, the beloved superintendent used to come to the English room with a bouquet of the flowers, and ask the teacher if she had taught lately Wordsworth's The Daffodils. After her reply to the affirmative, he would request one of the students to quote the poem which he so dearly loved.

Well, Greenville, Mississippi, has yet to become known as "The Daffodil City." Nonetheless, I found the story to be a fascinating one and decided to share it with others who are also smitten with "yellow fever."

MORE ON THOSE SOUTH AMERICAN DAFFODILS

Dr. Shejbal's query in the June Journal, "Are they daffodils?" in regard to flowers noted in a BBC documentary has brought several interesting responses. First of all, I was mildly chided—rightly so—for suggesting that the moisture-loving Eucharis grandiflorus might have been the flowers in the documentary.

Then Vivian Kiel of Cincinnati wrote to say that the narcissus are pictured in The Flight of the Condor by Michael Alford Andrews and published by Little, Brown and Company in 1982. The book apparently was done by the same people who did the BBC documentary. We are trying to get permission to use the photo in the Journal, but if you want to check for the book at your local library, the "daffodils" are shown in Plate 43. The photo was taken in the Atacama Desert near Copiapo, Chile, and the text (page 92) mentions "two kinds of narcissi" but does not describe them.

From David Lloyd, Oxfordshire, England came the following:

In the June Journal, J. Shejbal wrote a note about a flower shown in the TV program "Flight of the Condor," . . . and speculated about the hybridizing possibilities of this plant if crossed with our own narcissi.

The late John Lea was very interested in this flower, as also was I, for it did indèed look remarkably like a tazetta, and we discussed it and corresponded about it. John was convinced that it could not possibly be a narcissus, and in the end the problem was referred to one of our greatest authorities on bulbs, Mr. Brian Matthew. Alas for dreams of waterless narcissi and an indigenous (South) American daffodil, Matthew unhesitatingly identified the beast in question as Stemmatium narcissoides. Perhaps we may have better luck when one day Matthew Zandbergen's Brazilian narcissus, with flannel petticoats around its bulbs, is rediscovered. Until that happy day we over here will concentrate our attention on the Loch Ness Monster.

BEGINNER'S CORNER

FRANCES ARMSTRONG, Covington, Virginia

December is a month for family and friends, of joyous holidays and exhausting activity. The winter months that follow allow us time to recuperate, to contemplate, to plan ahead. We may take advantage of the slower pace to straighten our daffodil lists, correct and refine our hastily drawn charts, study daffodil literature, write an article for the *Journal*, plan entries for flower shows or make lists for spring orders. Gardeners are rarely idle.

If you neglected to fertilize your daffodils last fall, late winter is a fine time to do so. It is much easier to fertilize before the foliage emerges. Chances are the winter snows and rains will soak the fertilizer into the ground quickly. Use a fertilizer low in nitrogen (2-12-12 or 3-18-18) unless you mulch with fresh material such as wood chips. In that case slightly more nitrogen (5-10-10) may be required.

No matter what your climate, when daffodil foliage emerges, remember to

water if rainfall fails to supply an inch a week.

Happy Holidays!

TAZETTA TALK

WILLIAM R. P. WELCH, Carmel Valley, California

The remarkable vigor seen in upwards of 10% of seedlings raised from Avalanche by various tazetta pollens has kept me using it on a considerable scale in spite of erratic results over the years. Having worked with it for five years now, it is clear that the weather is not the main cause of my small crop of seed in some years and large crops in other years, although warm weather is of course a must on the days when pollinations are made. What matters most is whether the bulbs are newly planted or have been in place from past years! As I think back, in all cases of abundant seeding it was on new plantings, and in all cases where seeding was poor it was on those left in place. What put me onto this was pollinating two adjacent plots on the same days using the same pollens. On the second year plot the crop was negligible versus generous on the new ones, which also had noticeably larger stigmatic surfaces.

What must now be determined is whether this is due to the greater vigor of bulbs in their first year or whether a critical soil nutrient is being depleted after the first year of growth. In the past these were planted into new land; however, in the future some will be planted back where they came from to see if this makes any difference. This may not rule out a nutrient, however; for if fertility is regained anyway, we may be dealing with one which is only released by the soil in sufficient quantity to allow seeding on an uncrowded new planting. Perhaps there is a phosphorus deficiency as this element is so important for seeding, so tests will have to be done and the results given here in a future issue.

I have also observed better fertility in the true Grand Monarque, where seed was set easily on bulbs received as chips from Australia in the spring of 1983. These were planted in new ground during the summer, four inches apart in both directions, and upon watering in the fall they made vigorous foliage growth, which appeared quickly, and was followed by a new crop of leaves between the old ones at the normal time in winter. Flower stems also followed at the appropriate time and while most were picked, a few bug-damaged ones were left and crossed, and in nearly all cases seed was set, normally unheard of in this variety.

Preliminary evidence suggests replanting is helpful for other tazettas of

unreliable fertility.

Possibly hundreds of my 1981 seedlings are now large enough to flower in the coming season, their fourth year of life. With six to twelve bulbs per gallon can, they are now very crowded, so have been dumped out for planting in the ground. In some batches there is a high percentage of "splitty" bulbs; and as these will never amount to anything, they are being discarded. But in every batch there are some of good large size, not yet splitting, and these are what I am really after. The slowpokes are discarded as I would not want them around to pass on their slowness to the next generation. I wonder if by breeding only from those individuals which reach flowering size the fastest, one could develop after many generations some that would flower in their second year of life? A few do now in their third, particularly those derived from Paperwhite.

Matador seedlings have generally been slow growing, but I believe the fault here is mine, as their poet background indicates a greater need for water than the others, which has not been forthcoming but will be now that the severity of the

problem is clear. Any of poetaz background are very backward.

I noticed in one of the cans that I had put in enough wood ashes that these were still clearly visible two years later. In this can not one seedling survived. Perhaps it was too alkaline. In another can, I had instead given a large enough dose of greensand (slow release potash) that this was still visible, and in this one the seedlings were much larger than in any of the others grown from this particular cross (Israeli Sol × Paper White). I'll be doing a lot more experimentation with greensand in the future. It is a good source of trace elements and is 7% potash.

The most vigorous batches are those from Avalanche × Matador?) and Ziva × Australian Paper White (both ways). Both gave some individuals of golfball size, which is very good for bulbs only three years old. A few cans were broken by bulbs attempting to escape through the drain holes or even by pushing against the bottom! As I write this in mid-September, many of those from Avalanche have leaves emerging after having been watered only a few weeks before. No emergence from any of the adjacent bulbs of Avalanche itself, grown under identical conditions. The earliness of emergence is encouraging. This along with the fact that Avalanche has been known to flower as early as October-November under certain conditions, leads me to look upon it as having good potential as a source for earlier offspring. Ziva has proven itself as a source for great earliness in its offspring, but as it is itself so very early, this comes as no surprise. Many of its seedlings are already up or emerging.

The above show a willingness to make roots on newly planted bulbs much sooner than on most of the named tazettas. I have generally found that newly planted bulbs of most tazettas do not make roots until the ground cools off with the first rains in September or October. Before that, nothing will happen no matter how much one irrigates. This in spite of the fact that if one is dealing with established bulbs (which always have a few roots all summer long despite dry soil) new roots will even form in July or August if one irrigates them at that time. It seems that once a bulb is forced into complete rootlessness by being dug up, only the cooling soil of autumn will induce the bulb to break summer dormancy.

Years ago when I was first starting out, Les Hannibal told me how narcissus bulb flies are attracted by the "decaying" foliage, by which he meant leaves which are yellowing or drying up. Over and over again I have seen proof of this. Not only do they prefer to attack varieties which die off first, they also will readily attack the later varieties when these are grown in grass, which makes the ground dry out faster and the leaves therfore yellow off sooner than they should. Those of the same varieties, when planted in cleared land and irrigated to encourage the foliage to remain green as long as possible, are virtually immune to fly attack.

From Francis Hicks in the Isles of Scilly came a unique form of Double Roman (Double Chinese) which he rogued out of another grower's mixed tazetta stock. It

is a very full double flower, 1 3/4" across and borne on strong pedicels unlike the usual type which is a bit floppy when fully double. The doubling is marvelously well arranged, full but neat. There are plentiful petaloid anthers and the pollen is fertile. The stem is strong and tall and the stock is healthy. Of the five thumb-sized bulbs he sent, derived from the chipping propagation technique, one flowered with five florets and all looked as though they were growing from bulbs far larger than was actually the case. If this lives up to its initial promise, it should render the ordinary type obsolete.

SPRINGWORLD IN AUSTRALIA

FRANCES ARMSTRONG, Covington, Virginia
Photos by Wells Knierim

On August 31, 1984, thirty-eight members of the American Daffodil Society assembled in Melbourne to begin the Australian section of Springworld '84 incorporating the Third World Daffodil Convention. Those of us who arrived that afternoon by way of Sydney and Canberra were met at the airport by Lt. Col. Leslie P. Dettman bearing a long stemmed perfectly formed bloom of Festivity which he presented to our A.D.S. President Helen Link, an American daffodil for an American lady. It was only the first of many kind and thoughtful courtesies extended to us during our eleven days in Victoria and Tasmania.

Melbourne, the capital of the province of Victoria, is a gracious city with wide tree lined streets, many parks and gardens blazing with spring bloom for our visit. The evening we arrived, we were treated to a welcoming cocktail party, bountiful with food, where we met many of the members of the Australian Daffodil Society, our host for our stay in Victoria.

The next afternoon, spring in September became a reality when we were taken to the Box Hill Flower Show held in the very handsome Town Hall, a recreational center for this suburb of Melbourne. The daffodil stands ran the length of one side of the spacious room and half down the other. The center of the room was filled with thousands of camellias of every size, form, and color while vases of spring shrubs, other flowers, potted plants, and hanging baskets were exhibited as well. In another room on a lower floor the floral art section was crowed with many stunning and stylish designs, the arrangers having taken good advantage of the great wealth of plant material available in Victoria in early spring.

But back to the daffodils. Trumpets and long cups dominated the exhibition. As a whole the color was exceptionally good and we Americans envied the long straight stems we found here as well as other places later on. J. N. Hancock & Co. won both the Best Daffodil Bloom in show and the Champion Australian Raised Daffodil in show with a 2 W-P seedling, 43/77. The bloom had a very round overlapping perianth, the three petals all out touching, with a well colored rather long pink cup. Of heavy substance and very refined form, it well deserved its award. Reserve Best Bloom was also a Hancock entry, 2 W-W Isabella, of excellent form but rather creamy color. Other fine cultivars that caught our eye were Akala 1 Y-Y, Jobi 1 Y-Y, Tablecloth 1 W-W, First Frost 2 W-W, Hylas 1 W-Y, and Pink Bairn 6 W-P.

During our days in Melbourne, we made trips to visit the gardens and farms of five daffodil growers. Our first stop was at Longeray Daffodils at Lancefield where Beth and Ken Hughes have five acres of daffodils and a display center with vases of cut blooms in season. Their display beds were neatly cut into a grassy, windy hill with mowed paths. There were some familiar classic Irish cultivars, a few Dutch, and many unfamiliar Australian ones, all with magnificent color.

Later that day we proceeded to Langley Vale, the charming home of Mrs. E. Murray. Mrs. Murray has been growing daffodils for fifty years and still gardens from her wheel chair. Among the many beautiful flowers that have come from her hands is My Word 2 W-P, a show winner in both hemispheres. Mrs. Murray went with us out into her two and a half acre hillside garden where daffodils are found naturalized around old trees, in beds with many other plants and also in beds solely devoted to daffodils. Most of the beds were surrounded by rocks which she herself had hauled in wheelbarrows from an adjacent field.

Fred Silcock had brought some of his seedlings to Mrs. Murray's and these were displayed along with some of hers on a long porch. There were many attractive and unusual things among them, and pencils were flying noting names and numbers. Fred, who lives at Mt. Macedon, scene of a severe brush fire in 1983, is particularly interested in reverse bicolors and is now starting to register some of his seedlings. The members of the Kyneton Horticultural Society served us here a lavish and delicious tea, most welcome on a cool and moist afternoon.

The following day we were traveling near Menzie's Creek in a very steep V-shaped valley, bright green to the top of the hills, when suddenly around a curve we saw the outline of an enormous trumpet daffodil, golden yellow against the greenest of grass, high on a hill surrounded by great fields of daffodils. We later learned that 8,000 daffodil bulbs were used to form this striking design. This was our introduction to the J. N. Hancock & Co. Daffodil Farm, a business taken over by Mr. Ted Breen in the late fifties and now being handed over to his son and daughter-in-law, Rex and Kath Breen. First Frost and Ansett come from here.

On either side of the narrow road there were long rows of yellow and white daffodils running straight up the high hills. Planting them up and down hill is necessary for drainage, we learned. Grass quickly grows over the plantings and prevents erosion. On display for us were a large number of their blooms as well as their show winning seedling 43/77 all swathed in ribbons and now proudly named Ethel Breen. Mrs. Breen had hybridized it, so the family had decided it should be named for her.

On the morning of our last day in Victoria we drove to Ellimatta Daffodil form at Diamond Creek, home of Lt. Col. Dettman. His daffodils grow with abandon up hill and down in small beds and large paddocks. He had cut some of his favorites and had them displayed in vases inside his home. Among them was the lovely poet of his breeding named Bonnie Marie "for that little girl in Virginia," Bonnie Hohn.

The last visit was made to Mr. Alf Ladson's farm at Hoddles Creek where we were greeted with a large sign saying "Welcome, Springworld Visitors." His fields contained some of his own originations as well as some of Fred Silcock's seedlings. We particularly noticed Jean Ladson, a very pale 2 Y-W.

On all these trips outside of Melbourne we drove through a variety of landscape. At times there were verdant fields usually full of sheep and frisky lambs. In the mountains and other shady areas the tree ferns and other growth were spectacular. And there was much of the eucalypt bush which provides sustenance to a wide variety of wildlife. The various forms of wattle (acacia) decorated the landscape with its golden bloom. And I might add that the beauty of the Australian countryside is enhanced by the complete lack of signs and billboards.

A formal farewell banquet filled our last evening in Melbourne. After dinner we were entertained by two interesting and witty speakers, Dr. Judith Kinnear, head of the Biology Department, Melbourne College of Advanced Education; and B. J. Milnes, Marketing Manager, Victorian Tourism Commission.

We cannot leave Victoria without mentioning some of the many things we saw there other than daffodils. Among the highlights were a visit to the Karwarra Native Plant Garden where hundreds of species of Australian flora have been planted on five acres. Then there was the 200 acre National Rhododendron Garden in a mountain ash forestry setting with its magnificent collections, not only of rhododendrons, but of camellias and other plants as well. The Australian Daffodil Society has recently begun a collection there.

Certainly no one on this trip will ever forget our visit to the Healesville Wildlife Sanctuary. Here we were able to walk among all the marvelous animals and birds of Australia. Would that we had had days to spend there. We also enjoyed visits to the Royal Botanic Gardens and to the new Art Centre in Melbourne.



ADS President Helen Link and Australian Daffodil Society President Frank Coles enjoy the daffodils.

Another mention must be made of the delightful Aussies who joined us sometimes on our tours, sometimes at social functions. And most of all we shall never forget the tender care of Mr. Frank Coles, president of the Australian Daffodil Society, and that of his lovely wife, Lyla. Mr. Coles shepherded us around, stayed with us constantly, kept us on schedule, and invited us to their attractive home where he raises many daffodils in an old lemon grove. Without him our trip would have been quite impossible.

TASMANIA

In Tasmania we were the guests of the Tasmanian Daffodil Council and were met at the Devonport airport by Dr. Mike Temple-Smith, TDC secretary-treasurer. He accompanied us on the coach which took us directly to Ulverstone to visit the garden of Ross Glover, a long time hybridizer.

Mr. Glover's property is small but well utilized. Beds are raised and surrounded by concrete curbings and walks. A wide variety of plants along with choice daffodils enhance the front garden. In the rear there are beds devoted solely to daffodils and seedlings while others contain vegetables, a study in making the most of limited space. We saw many seedlings here that were quite enticing.

Later we journeyed to the Jamie Radcliff farm at Barrington for a picnic lunch and a look at their daffodils which they raise for the cut trade. The Radcliffs have long been known for pink breeding, having introduced the first pink trumpet in

1932. For us they had set up a display of Pink O'Dawn 1 W-P, 1932 (C.E. Radcliff); Karanja 1 W-P, 1950 (C.E. Radcliff); C.E. Radcliff 1 W-P, 1966 (James Radcliff) along with a vase of their newer pink cultivars.

We drove through rolling green fields thick with grazing sheep, the green occasionally interspersed with groves of apple trees just bursting into bloom or with a plowed paddock revealing the rich chocolate-colored soil, in order to reach Launceston where we would stay for two nights.

The Launceston Horticultural Society held its spring show the next day at Windmill Hill Hall. Ordinarily in Australia one person judges all the daffodil classes unless it is a very large show when additional judges may divide them up. But in deference to the visitors, two panels of three American judges each were invited to judge this show. We were told by several of the exhibitors that they felt the results were just about the same as if their usual judge had made the decisions.

The number of many splendid seedlings was the outstanding feature of this show. The schedule defined a seedling as "a cultivar raised by the exhibitor," a very broad definition which permitted the full schedule of seedling classes to be well filled. Most of the daffodil exhibitors in Tasmania are also hybridizers. The results of their efforts as shown here were amazing: long cups of soft apricot with yellow rims, pink fringed cups, ruffled edges on trumpets, white rims on pink cups, tailored symmetrical doubles, so many new things.

The Grand Champion Bloom was seedling 4/84 (Ansett × Ristin) exhibited by Rod Barwick. Reserve Champion Bloom was named Pink Special 2 W-P, a large smooth flower with a long pink cup, exhibited by Ross Glover. Jackson Daffodils was the major prize winner with a number of trophies for special collections. Some of Jackson's outstanding named cultivars were Biograph 1 Y-Y, Loop Hole 2 W-W, No Way 3 Y-R, Pontes 1 W-Y and Maltara 2 Y-O. Rod Barwick, a relative newcomer to the daffodil scene, is especially interested in the smaller flowers and fairly well swept the classes for Divisions 5, 6, 7 and the miniatures. Our president, Helen Link, graciously presented the awards.

We were entertained that evening by the Tasmanian Daffodil Council with a formal dinner in the Launceston Country Club and Casino. The president of the





Left, Jackson 15/84; right Chaos, both seen at Launceston.



Top, left, No Way; right, Loophole; bottom, left, Vahu; right, Pontes

Council, Mr. Harold Cross, delighted us with his tongue in cheek version of the history of Tasmania. Later, in an "Uncle Sam vs. the Tassy Devils" question and answer period concerning daffodils, he valiantly fended the American queries.

A two hour trip the next afternoon took us to Hobart, a city of unusual charm, and to our hotel overlooking the large and beautiful harbor. In each of our rooms we found a vase of daffodils from the Jacksons.

Sunday dawned warm and sunny, a perfect day for a trip to the summit of Mt. Wellington, 4200 feet, with marvelous views of Hobart, the harbor, and the sea as we ascended. It was also a perfect day to visit David and Robin Jackson in Geeveston. David is a third generation daffodil grower. Many well known names such as Vahu and Immaculate have come from the Jacksons and more are coming every season.

He grows his daffodils in long rows sloping southward to the shores of the broad tidal Huon River. The three foot wide beds separated by two foot sunken paths were neatly maintained and well labeled. The daffodils stood tall and straight, many with enormous and colorful blooms, remarkably free of nicks, mitten thumbs, and insect injury. We found ourselves writing down names of nearly every cultivar for our "want lists."



The Jacksons very hospitably provided us with a delicious buffet luncheon in their spacious home. The bountiful platters of large crayfish, similar to our lobster and even tastier, had been freshly caught in the Huon River. There was salmon paté artistically decorated with daffodils along with an abundance of other dishes. Friends and relatives had come in to help and to socialize with the Americans. We are most grateful to the Jacksons for a memorable afternoon.

Our final day was spent in the renowned Royal Botanical Gardens in Hobart and in the nearby picturesque village of Richmond where in a quaint little shop we were guests of Harold Cross for afternoon tea.

Reluctantly we left Australia, the land of the kangaroo and the emu, the wallaby and the wombat, the platypus and the cockatoo, the land of daffodils which grow so luxuriantly and beautifully that we travel half way round the world to see them.

DOWNUNDER DAFFODIL DAZZLER

(Springworld '84)

PEGGY MACNEALE, Cincinnati, Ohio

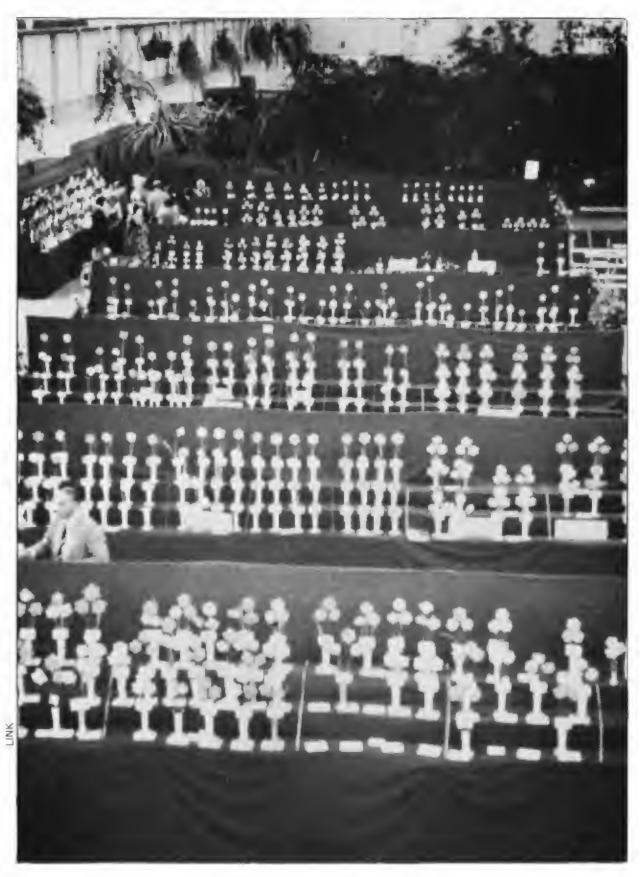
While waiting for our plane in Hamilton, N.Z. for the start of our journey home, I am trying to assess the impressions of Springworld '84. How to begin to describe five busy, busy days of viewing daffodils in every conceivable situation?

The convention as a whole was an ambitious plan—a dream that was realized magnificently, with very few evident hitches. Peter Ramsay took the brunt of the most obvious problem, but no one in all of Hamilton will ever forget Friday morning, September 14, when 10,000 school children, bused in from every school in the area, descended en masse upon the show. Added to the busloads were carloads of eager citizens. The chaos stopped traffic for twenty minutes all over town, so Peter heard about this promptly from the Chief of Police. Our group, fortunately, had been at the show on Thursday afternoon, and also we were priviliged to visit early Friday morning so we could take photographs for an hour before the doors were legally opened.

To get back to the beginning: most of us came down from Auckland on Wednesday the 12th, arriving near noon, just in time for a welcome from the mayor, Mr. Ross Jansen, who received us in the city council chamber. He not only impressed us by wearing his gold badge of office (a chain of medals, linked together), but he, assisted by many of the city council members, treated us to a delicious buffet luncheon. Next on the agenda was a stop at the show complex to pick up our registration kits, and finally we reached our Motor Inn, our home until Monday.

A lovely reception with wine and trays of goodies was provided early that same evening by the English Speaking Union. We were able to meet the members who were to entertain us in their homes the following evening, plus many other charming Kiwis, who outnumbered us by 2 to 1, and circulated among us with practiced expertise—a fine example of the hospitality we were meeting on every hand.

The Springworld show itself started for us on Thursday morning. Some of us taxied over early to help Graham Phillips stage his flowers. He had quantities of blooms which Kathy Andersen, Ted Snazelle, Marie Bozievich, and Marilynn Howe helped groom, as they learned the N.Z. way of placing flowers, leaves, and moss in aluminum vases. I was a "gofer," and found my way to the water faucet and the various class locations, directed by many kind people. The number of classes was so bewildering that I still do not have it all sorted out, mainly because it was unfamiliar. In comparison with our shows, there was no "Section B" of three stems, and no "Section C" of five stems from each division. There were many (21) collection classes of, say, three varieties of three stems each, or six or twelve different cultivars. All of these were for special trophies. The silver trophy given by the American Daffodil Society was for nine blooms, American-raised daffs, with not more than three blooms of any one cultivar. This specification points up a very important difference in our scheduling. Unless the schedule states otherwise, in New Zealand shows the vases of three may contain three of a kind, two of one kind and one of a third, or three all different. Un-named cultivars are allowed to compete, and numbered seedlings need not have the originator's name. Another basic difference is that an entry fee is charged for staging flowers, and there is a fee for visitors to the show.



Daffodil Show at Springworld '84

In the Springworld show there were seven classes for miniatures (there is no Approved List in N.Z.) and two classes for Intermediates, both for three stems. I was impressed by the fact that there were twenty-three classes for seedlings!

These were hotly contested, too. In fact the stands were full, and presented a stunning sight with four tiers of blooms against a background of darkish grass green. Since contestants registered their intent ahead of time for each class, the space was reserved for them, so there was no crowding or re-shuffling of vases after they were placed.

It is impossible to discuss all the prize winners, but I will just say that the Grand Champion bloom was a very smooth 2 Y-Y, named Proska, entered by David Jackson. We all marveled at David. He brought only twenty-four flowers from Tasmania to the show, and won five trophies. Robin Jackson was thrilled to show us eight Waterford crystal sherry glasses, a gorgeous hand-painted ginger jar (daffodils depicted, of course), a silver candelabra, and a framed water color of aralia flowers.

Peter Ramsay and Graham Phillips were among the other trophy winners, and we were able to meet just about all the other contestants, including a gentleman from Dunedin named Alan Paterson, who grows miniatures, and a nice young man named John Hunter, also from the South Island, who was given a Preliminary Award of Merit for a brand new, huge, smooth, brilliant 2 Y-R which he has registered as Excalibur.

Needless to say, Thursday was an exciting day. A luncheon at the show complex was enjoyed while the judging was going on. We could go out on a balcony from the lounge-dining room and look over the main floor where the judges were at work. This balcony went around two sides of the hall, and those who ventured out there were doubly rewarded by the displays of school children's art work and creative writing, mounted in lighted cases all along the side wall. This was an unexpected and delightful bonus.

The show report would not be complete without a paen of praise for the floral art. No effort was spared to present twenty-two elaborate floor designs, each on a separate platform measuring 10' × 5' × 2" high. The theme for these was "A Slice of New Zealand Life." Creative arrangements and accessories symbolized various facets of New Zealand industries, sports, and resources. A year of "run-off"





Left, Obsession; right, Jackson 193/82 (Rhapsody × Immaculate)

120





Red Ember

Proska

competitions all over N.Z. had resulted in the very best floral art designers in the country being chosen to compete at Springworld '84. Large containers of colorful flowers and foliage, placed on pedestals at each end of the tiers of horticultural specimens, were further evidence of the talent of Kiwi arrangers. All of these designs were judged for awards.

In the outer foyer, as a preliminary to the main hall, were some of the most interesting exhibits of all. Beginning with a display just inside the entrance, a series of alcoves around three sides of one end of the room depicted the history of New Zealand. These were designed and executed by groups of floral art members, and each alcove presented at least one stunning flower arrangement. The design depicting the Maori wars with the British was especially effective, and won a top award. A huge display in the center of the foyer put up by the Institute of Horticulture was also outstanding. A tiered stand held pots and hanging baskets of native plants of New Zealand, while three floor-level sections were planted with shrubs and flowers native to England, South Africa and the Orient—all of which are widely used in New Zealand gardens. All were accurately labeled and deserved careful study.

Thus we spent Thursday, observing, learning, and wishing we had much more time to absorb it all. Some of us never made it back to the exhibits in the far end of the complex, but I think most of us did get into the area where the commercial displays were set up. We could have used a whole day for just that part, for this is where Spud Brogden, Graham Phillips, and a new grower, Mr. Dijk, had their stands. The latter display was of interest because of the quantities of miniatures. Mr. Dijk is planning to grow and sell these in as great a variety as possible—good news, indeed.

Finally we had to take the bus back to our rooms to get ready for our "home visit" evening. The kind members of the English Speaking Union had issued invitations to all of us to join them for a home-cooked meal, about four visitors per

host. It was fun comparing notes the next day to see what treats we had experienced. I believe almost all of enjoyed the same dessert: the famous Pavlova,

a meringue concoction that is hard to describe, but oh, so good!

Friday morning, already described, was our chance to catch up on the features of the show we had missed the first afternoon. It was difficult to wade through the hordes of children to reach the stairs to the lounge where Brian Duncan gave a late morning talk, with slides, on the daffodil breeders in the British Isles. Three more talks came after lunch: Ted Snazelle presented his fine program on Daffodil Pests and Diseases, Harold Cross (Tasmania) discussed his work in breeding better doubles, and Marie Bozievich matched Brian Duncan's subject with slides of American breeder's flowers. Before we knew it, the afternoon was over, the children were all gone, and the hall was calm for a last look before we made a brief trip back to the hotel to change for the Awards Dinner. This was a sit-down affair rather than a buffet, and a splendid prelude to the program of handing out awards. A special event was the presentation of appreciation awards. Heartfelt applause was heard for Jim O'More (present in a wheel chair, after a recent stroke), Mr. Poole, and Mr. Brogden (Spud Brogden's father). It was then that we all missed Phil Phillips, who also did so much for New Zealand daffodils.

On Saturday we all did our own thing. Most of us went on one of the planned tours, either to Rotorua, to the Coromandel Peninsula, to Oparau Lodge and Kawhai, or on a shorter trip around Hamilton. It was a beautiful day, and we all enjoyed the change of pace, and the chance to see some of the special features of the New Zealand countryside. This buses were all back in time for us to dress for our last night together. This dinner was a Kiwi smorgasbord, featuring a delicious roast pork and many seafood delicacies. Music during the meal had our more energetic members dancing in between courses, and afterwards we had entertainment by a group of Maori singers and dancers. Then more music and

dancing—a gala evening.

One would think that another full day would be an anti-climax, but who would not enjoy the variety of talks planned for the morning, or the afternoon chance to see the gardens of Max Hamilton, Peter Ramsay, and Graham Phillips? The talks were in pairs, so one had to make a choice: tazettas or miniatures at 10 A.M., photography or hybridizing at 10:45, grooming & staging show flowers or growing bulbs in bulk at 11:30. Experts from the States and Tasmania joined the New Zealand experts in these forum talks and demonstrations, which were held at the University of Waikato where Peter Ramsay is a professor. It was all so informative and interesting that we never had time to inspect the daffodil planting at the University. This is just one of the reasons we should all plan to return to Kiwiland. Another reason, of course, is to see again all the good friends we met, and get another look at the flowers which Peter Ramsay, Max Hamilton, and Graham Phillips are growing. Another gorgeous afternoon, with that clear, pure sunshine lighting up the daffodils, brought our Hamilton visit and the Springworld '84 festivities to an end. Thank you, one and all, for a wonderful time.

NEW ZEALAND TOURS

EVE ROBERTSON, Taylors, South Carolina Photos by Wells Knierim

On a day of leisure after the main events of the convention were over, a large number of our group visited Rotorua, called "The Bay of Plenty". For many miles we saw rather flat farm lands with great expanses of good green pastures. Endless numbers of sheep were grazing. There were also wild turkey and deer. The deer has been bred for its meat and is exported mostly to Germany.

Tall hedges were grown which helped keep cattle from wandering until other plots were ready for grazing. A constant supply of food is ready as the area never

suffers from drought. The roadsides as well as the banks of streams were interestingly naturalized with calla lilies similiar to the way N. jonquilla are in Conneis. Alchams and Louisians.

Georgia, Alabama, and Louisiana.

The road to Rotorua held many interesting places to visit. One was Rainbow Springs, a wildlife reserve where we saw many birds and animals. Also of interest were the rainbow, brown, and speckled trout. They were fed in the pools where they loved to congregate. The guide said that those and ones in the streams

elsewhere often grew to weigh twelve or fourteen pounds.

Another stop was at the Agradome. There were nineteen different breeds of trained sheep. They were lined up on a ramp by the sides of the assembly room, and at the appropriate signal, each knew his time to walk to the stage. There, a cup of grain was waiting, and each ate his own and tried to sneak a bite of his neighbor's. The trainer spoke of their controlled breeding program to produce the best meat and wool. This was culminated in a quick shearing demonstration which was enjoyed by all but the animal. The poor thing was left looking much thinner, and his then resembled his birthday suit. Outside, before we left, we witnessed a well-trained dog guide the sheep as the trainer gave instructions.

The Maori inhabitants were in New Zealand before the Europeans, and had established their own social and racial characteristics. In Rotorua, we visited a Maori village and saw samples of their art. Included were wood carving, personal ornaments, stone images, tattooing, paintings and a demonstration of costume dyeing and assembling.

This area down through the years has been—and still is —a region of great geothermal activity. There are bubbling hot pools which by some are considered to contain curative medicinal properties. At Hot Water Beach, hot water seeps into the beach between high and low water marks. At low tide it's possible to have a natural hot bath to ones liking by excavating a shallow hole in the beach for hot water to rise and providing a channel for cold to come in from the sea. The greatest economic value these hot pools provide is for cooking and heating in the homes.

On our return to the hotel, we visited the daffodil farm of Mr. and Mrs. Farmer. Many lovely daffodils were growing there. Their grounds were attractively landscaped. Here we saw the unusually lovely plant, angelica, which many of us had never seen. The Farmers were interesting people to visit, and served us a delicious lunch.

After our farewell lunch in Hamilton, on Sunday, September 16th, we visited the gardens of Dr. and Mrs. Peter Ramsay, Mr. and Mrs. Max Hamilton, and Mr. and Mrs. Graham Phillips. Each of these gardens was nicely kept and contained many fine flowers.

The Ramsay place was a steep hillside, well terraced, and very interesting. It took a bit of doing getting down to the daffodil beds and up again. One seedling was reward enough for going down: 17/74, (Motif × Chinese White) a nice 3 W-WYR

with clear coloring.

Monday, September 17, we left Hamilton for our journey south. At Otorohanga, we visited the Kiwi house. We saw the birds in a closure resembling their natural habitat, that of a deep forest. An informative briefing was given on the life of the bird. They are flightless, stand about eighteen inches tall, with a shaggy appearance and no tail. Their nostrils are at the tip of a long flexible beak, with which they burrow deeply into the soil for food which is chiefly grubs and worms. The eggs, which weigh approximately one-fourth of the body weight, take about eighty days to hatch. The male bird hatches the eggs which is probably fair, considering the job the female undertook in laying it.

From New Plymouth, a visit to daffodil grower Mr. G. Yeats was enjoyable. His grounds were planted with many unusual plants and they were well grown. Mr. Yeats had a nicely groomed patch of daffodils. Many of his new bulbs were growing

in pots and were of excellent quality. Here again we were served good food and drink.

Our next stop was the home of Mrs. Esme Phillips, widow of Phil. Many of Phil's introductions were in flower and looking good, as were more unnamed seedlings. We know their son, Graham, will exercise good judgment in caring for these. The home is on a slight hill, tastefully landscaped with magnificent views in every direction. No greater location could have been chosen for a home.

Mrs. Phillips, Graham, and some of their friends served us a bountiful and

delicious lunch.

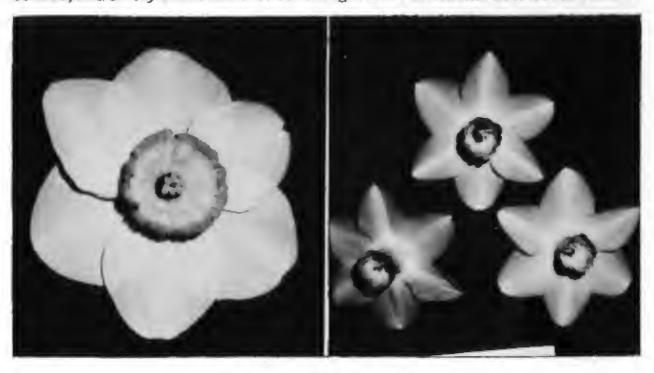
Later in the day we saw the famous Glowworn Grotto. Many series of paths, pale lights, and stairways guided us down through the caves, while overhead and on the sides were flickers from hundreds of thousands of glowworms. They send out strands of mucus, called fishing lines, which attract and ensnare insects for their food. Some of the areas, or rooms, are so beautifully formed as to resemble pipe organs and cathedrals. In one area where the sound effect was perfect, given a good pitch by Betty Madsen of North Carolina, we proudly sang a verse of "America, The Beautiful." As we reached the bottom of the caves, there was a stream with small boats waiting to carry us out.

Driving through the countryside with glimpses of the coast at Awakino and other points south, we had our first view across the Tasman Sea of snow covered Mt. Egmont. Our drive continued through rich farmlands and pastures of sheep and lambs to New Plymouth. Everywhere, there were sheep. We were told: New

Zealand has three million people and seventy million sheep.

The Pukeiti Rhododendron Garden was a treat for everyone, especially rhododendron lovers. Around 900 acres were spectacularly landscaped with rhododendrons and azaleas, mixed with the native plants. Long vistas of green grass and perennial borders with streams and woodlands were appropriate settings for all of these plants. Only the early blooming rhododendrons, some as tall as trees, and azaleas were out. One could imagine what a joy it would be at peak bloom.

At M.E. Brogden's nursery we were served a very wonderful lunch, in fact, a feast, and a real treat, seeing his daffodils. His planting was orderly, immaculately kept and there were so many good flowers and unnamed seedlings, we regretted not having more time. On the lunch table was a large vase of well grown and intensely colored flowers. It included the very pink Kestelle, brilliant 3 W-WYR Janelle, and a very unusual 2 Y-WYP Twilight Zone which had been sensational in



Left, Janelle; right, Twilight Zone

the Hamilton Show, and O-R × 65/G4 which had a good reddish perianth.

This is such an exciting flower, everyone wanted it.

Wellington, known as the windy city, is a large and majestic city, surrounded by mountains all around the bay. The most expensive homes of the area were hanging on the mountain sides. When our coach driver carried us to the top of Mt. Victoria, we had a good view of the whole expanse of the city and the bay. The hills were so steep most of the streets were behind the homes and many of the carports were on top of the houses.

From Wellington we boarded our plane to Christchurch on the South Island. Leaving Christchurch we drove south through the rich farmlands of the Canterbury Plains, and the prosperous farming regions of Geraldine and Fairlee.

We were now crossing the island from east to west, heading toward the

Southern Alps and Mt. Cook National Park.

Our next hotel, The Glencoe, was in the foothills of Mt. Cook. The area consists of fifteen towering mountain peaks, with Mt. Cook being the tallest,

12,349 feet. We had a day of rest at the Glencoe.

Many of us chose for our amusement a ski-plane flight to the Tasman Glacier. Four Australians, Mr. and Mrs. Davis and Mr. and Mrs. Keith Robinson, and I were in our tiny plane. We eased so closely toward so many snow covered mountain peaks as we wound our way in and around to the glacier; it was a bit breath taking. Mr. Robinson, who was a jovial sort and loved talking, had never seen snow. As we continued in awesome surroundings his speech ceased, and his facial expression said it all. "Do you think we'll ever get out of this wonderland alive?"

When we landed it was a sheet of snow that was miles long and about two miles wide. Some of us engaged in snowballing, and some spoke with skiers. I wanted a small rock to bring back to a collector friend, but when our pilot said it was a mile to the nearest dirt, I abandoned the idea. The majestic splendor of Mt. Cook, (the Maori name is Aorangi, meaning "Cloudpiercer") and its entire area is an exciting

and exhilarating experience no one could ever forget.

After leaving the Mt. Cook area, we traveled south by the shores of Lake Pukaki and past Twizel with its large hydroelectric scheme, to cross the Lindis

Pass and follow the blue Kawaru River into Queentown.

While at Queentown, many of us flew to Milford Sound. The flight carried us throuth endless mountains, their peaks covered with snow, each one seeming more rugged and beautiful than before. Looking below were fresh green valleys and blue lakes that sparkled.

The boat ride carried us over the clear water of the sound, and we saw many wildflowers, waterfalls, and some unusual wildlife. This day could well be called one

of the highlights of our visit to New Zealand.

With another day of leisure, some went jet boating, some shopped and many hiked. Queenscourt is a clean, orderly city partially surrounded by the clean blue water of Lake Wakatipu.

This lake gave Jim Kerr, of Dallas; Jack Veach, of Asheville, North Carolina; and me three hours of great fun fishing for trout. It was too early in the season and too cold to use flies. We trolled, as our guide suggested, and caught seven large brown trout. Some of them were up to two pounds each. Since we were leaving the next morning, Jack Veach had the chef at our hotel prepare the fish for breakfast. They were very nicely prepared, and gave pleasure to many of our group.

Another beautiful experience was the drive from Queenstown, toward the west coast and up through the lower reaches of the Southern Alps to Greymouth. The deep gorges were studded with boulders which reached down to the clear waters of the streams. Looking upward to the hills which were green enough as to have been fertilized, thousands of sheep were grazing; and still higher were rugged peaks covered with snow. Our drive alternated from this to views of the sea. Really, it was poetry in nature, and as our eyes feasted on this lovely part of the world it brought to mind a favorite poem that I remembered from high school days.

THE WORLD by W.B. Rands

Great, wide, beautiful, wonderful World With the wonderful water round you curled And the wonderful grass upon your breast-World, you are beautifully drest.

Our journey continued until we stopped at the Greenstone factory to view the manufacture of jade. This area is known to produce the finest jade in the world.

From this area we crossed the island again toward the east and Christchurch. In our rooms at the hotel were bowls of fresh, lovely spring flowers to greet us, placed there by the Canterbury Horticultural Society.

Friday, September 28, at 2 P.M., the Springfestival's outstanding flower show at Pioneer Stadium was officially opened by the Mayor of Christchurch, Sir

Hamish Hay.

The show hall was tremendous and as one entered, an overall view of it was

easily visible.

Many commercial displays of a wide variety of flowers, other than daffodils, were arranged in areas near the front and side walls. There were many unusual and artistic floral arrangements using their native plants. The colors and greenery of all this made a pleasing and complementary background for the excellent daffodil show.

The daffodils, around twenty-five hundred of them, were neatly staged on tiered tables, which gave an enticing and urgent welcome to come closer.

The flowers as a whole were of great substance, good form, and were well groomed and posed. The coloring was of such clarity and intenseness, as to seem unreal. What a treat for the soul.

The quality of this show indicated that there was joy in the growing, and pride in the showing.

Again I remembered a suitable thought from earlier years that can be applied to great growers of daffodils.

"If a man can write a better book, preach a better sermon, or make a better mousetrap than his neighbor, tho' he build his house in the woods, the world will make a beaten path to his door."

Here, as in so many places, Achduart was Best in Show, and was exhibited by Peter Ramsay. Dr. Ramsay was also the successful winner of several of the large collection classes. It is regrettable that I did not have enough time to record more of the winning exhibits. Those of you who belong to the New Zealand Daffodil Society will learn of the results, and those who are not members would be well rewarded if you would join. Send your dues to the Secretary, W. T. Hall, Harbutts Road, Fencourt, Cambridge, R.D. #1, New Zealand.

That evening we attended the "Icebreaker Evening" party at the Canterbury Horticultural Hall and met many lovely people who had planned so much for our

pleasure. Very delightful food and drinks were in abundance.

After the awards were presented, Mr. D.S. Bell showed slides of his introductions and many unnamed seedlings. This was a great joy and made us eager to visit the garden.

Saturday morning, September 29, we attended the International Daffodil Seminar at Lincoln College. A briefing about the college informed us of its earlier years when programs consisted mostly of practical programs for farming. It rapidly advanced the status of awarding degrees and now also offers a strong post-graduate course.





Left, Lemon Candy; right, Egmont Snow

Mr. Ron Close gave many helpful ideas about twin scaling.

Mr. Brian Duncan gave his methods of growing, from seed planting to the show bench.

That night we were entertained at Canterbury Horticultural Hall at a beautiful and bountiful cocktail party and official convention dinner. After many toasts were given, we were delighted by Mr. Brian Duncan's intersting, humorous, and touching dissertation on pains and pleasures of being afflicted with "Yellow Fever."

Sunday morning we visited Mr. D.S. Bell's garden at Templeton. His garden showed the results of many years' breeding of good daffodils. The flowers he had set up for us in the display room were of good quality. I especially liked 3 W-W Cradle Song, 3 W-YR Minaret, 1 Y-P Cabanova and 4 W-WP Matakana. There were many more worthy of mention.

We are very grateful to Dr. Peter Ramsay, Convention Chairman; Mr. and Mrs. Alf. Chappell; and all the hundreds of people in Australia, Tasmania, and New Zealand who planned and worked for years; with pleasure, to insure their visitors a great convention. People from Japan, Ireland, Australia, New Zealand, Tasmania, and the United States will always remember the wonderful visit to this part of the world.

Our farewell meeting was Sunday night at the lovely Canterbury Horticultural Hall. We were entertained by a Maori group. Their chanting, dancing, and singing was at times humorous, and at other times very moving, even though we did not comprehend the full significance. They appear to be an interesting group of people, and we enjoyed their performance.

Refreshments were in abundance. We all ate, sang, and danced with joy in our

hearts, and yet there was also a tinge of sadness.

Time was close for us to leave, and we were touched when Alf and June Chappell led the group in singing to us, "Now is the hour that we must say goodbye. Soon you'll be sailing far across the sea."

This, and some tender goodbyes, brought a close to the wonderful New

Zealand Convention.

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THE COVER PHOTO

was taken at Springdale, home of Jack and Libby Capen, looking across the test garden to the hill (Capen photo).

LANDSCAPING WITH DAFFODILS - PART 5

ELIZABETH T. CAPEN, New Jersey

Photos by the Author

(A continuation of the program presented at the Nashville meeting.)

PROBLEMS

Of course, many problems arise as one considers how to put daffodils into a landscape scene. They divide into three sorts:

1 - those we have seen mastered, even though solutions evade us;

2 - those we have faced and are happy with our own solutions thereof, which might help others in finding theirs; and

3 - then, some that seem prevalent, although not our own.

Let us consider the last first.

PROBLEM #1 CAN ONE WIN RIBBONS IF ONE MAKES A PRETTY GARDEN?

The great surge of ADS members toward seeking ribbons—and then silver—and then judgeships—has lead to a type of planting I can only deplore: that is the little patch of daffodils, formally aligned, while the entire rest of the place is devoid of any bit of spring beauty. Too often recently, this has been a first step to daffodils.

To prove that you can really make a beautiful garden with top-flight, prizewinning material, I want to cite for you three gardens I have known intimately.

Chris Tweit made a sunken garden—a couple of steps down, surrounding a grass patch about 30 feet × 60 feet. Here she planted the classic—not the newest—plants through the season—among others, daffodils, including the one hundred for accreditization as a daffodil judge. Everything was labelled, of course. Chris's garden could provide a prize winner for any show at any time, and it was always a joy to see.

Aileen Evans had a hillside plot, the very smallest in the suburb of Mountain Lakes; but, as did Chris, Aileen had an eye for quality. Hers was a tiptoe path among rocks, shrubs, and elegant dafs. Her keen eye always spotted the best to

add.

Chickie Hoen began, as did Chris and Aileen, promoting daffodil knowledge in her area many years ago. Her own garden is not big; but, as are the two above, it is a continuing display of the best of each season. Chickie is not an official judge, but she has been my first choice when I have been asked to bring someone "qualified" rather than "accredited" to help me judge a show. Chickie has proven my point by winning top awards offered in recent New Jersey shows; and I was delighted that she recently won the Best of Show Bowl for which I arranged at the first New Jersey Show, then won by George Lee, and reoffered for the first time since 1957.

I do urge that all daffodil fanciers, even seekers after ribbons, also, as did these three, make a beautiful scene of their treasures. Surely, all those at the recent Portland meeting could not but be inspired by the beautiful display created by

Madeline Kirby—a major feature of that 1984 ADS convention.

Some exhibitors may say, "But I must keep track of names, so I must make rows." Of course, we all want to keep track of names, so let us consider:

PROBLEM #2. IDENTIFICATION OF CULTIVARS

The whole problem in identifying cultivars of narcissus is that, unlike most perennials, a daffodil is out of sight at next planting time. So when one plants a nice patch of daffodil bulbs and then places a label smack in the middle, as happens often, the value of that label expires with that fall. By spring, it is lost in foliage, while by next planting time, the limits of the patch are undefined.

We have found three ways to help us keep track of bulbs underground:

1. We always put the identifying label of a bulb, clump, drift, as usually viewed, at the extreme right. (Of course, left would do as well, but consistency is necessary.)

2. We use architectural or strong horticultural features to define limits.

3. Finally, we use the alphabet.

Perhaps my experience with the Dutch pinks may serve as an illustration. I once was surprised to hear that there were other pinks than Mrs. R. O. Backhouse. However, the price for these new ones was pretty high. Most of them cost 40¢/bulb, when the basic price was 3¢ wholesale. I "sprung for" a dozen and found a place for each around our terrace. Each had an individual spot, defined by a step, a corner, an entrance, always with a small evergreen to help. So, I found twelve distinct spots. Then I planted alphabetically.

While this made no glorious landscape, it gave each cultivar a natural setting. Then, in a couple of years, each bulb was transplanted to a clump. When clumps were overcrowed, they became a drift in our Dutch Pink area on "The Hill."

Would not this way serve well for any exciting, very new ones of 1985, gathered

to be seen at close range?

Our way around the terrace can be extended to:

PROBLEM #3. PLANTING AMONG SHRUBS AND TREES

For many years, we thought we had mastered the technique of planting daffodils in a shrub/tree border. When shrubs are young, it is easy to use them to define daffodil clumps. Areas made by lines from the center of one to another create parameters for separate cultivars. These geometric outlines are easy to map and easy to plant within. The natural grace of daffodils precludes any stiffness such rigid limits might suggest.

The problem arises because shrubs grow faster than bulbs. I have climbed among well-defined shrub markers to retrieve almost lost dafs. Daffodils, replanted, will rejuvenate, and that is rewarding, but that is a poor way to create a

landscape.

Now, I discriminate. There are those we all love, that I sometimes call "the trash spring shrubs." Of course, forsythia leads the list. Apart from our ring of Forsythia intermedia spectabilis along the public roads, we have a collection of a dozen of the most interesting ones, among which I have lost many very nice daffodils. Now, we maintain a solid barrier of two feet of mowed lawn between the forsythia collection, rigorously pruned annually, and some very classy dafs.

However, there are less rampant growers that can serve as definers for many years without infringing on the daffodils' right to a piece of the sun. If I had to move to a small place today, I should not only forego all forsythia, but also such classics as deutzia, spirea, philadelphus, privet, and barberry—except for a few dwarf forms for the rock garden. From hundreds of beauties, I should begin with Rhododendron mucronulatum—for that first spring glow before the hardwoods start—and probably Cronus mas, another curtain-raiser. Right on their heels comes the magnolia cross from the Arnold Arboretum known as M. loebneri Dr. Merrill. This one is the hardiest of a group that accompanies the daffodils into June, but with a little more room and a little more warmth I would cherish the great Magnolia grandiflora of the South.

Our first choice of many prunus we like to accompany early-midseason daffodils must be P. Hally Jolivette; it is long-blooming (because a double), and it is relatively small and can be contained. Then come the malus, an overwhelming group, which we have explored modestly. If you doubt the magnitude of this genus, get the Throckmortons to introduce you to miles of buckboard trails through the most extensive collection of all. It lies in their bailiwick. All are gorgeous; but for a small garden in an alternate-year apple area, I believe I should,

as a daffodil fan, choose M. sargentii—it stays small.

When it comes to cornus, the next major group to bloom, it is hard to accept what is happening to our Cornus florida. It is the greatest landscaping tree of the entire East. Varieties include the well-known pinks; the more recent "reds;" the famous east-west cross, the chartreuse double, a real pet. There is C. xanthocarpa, which is rather fun, because the birds that strip the red-berried quickly, take longer to discover the yellow-berried. Others on lists have not thrived here or would not be missed. Sadly, I should advise anyone with a small place to eschew the lot and to settle for the early C. mas, with only true flowers, already mentioned, and the Orientals: C. kousa (from Japan) and C. k. chinensis (from



Daffodils, prunus, PJM rhododendron, *Pieris floribunda*, and *P. Hally Jolivette* at Springdale.

China). These seem not to be affected by whatever is killing our natives. They will not bloom with daffodils, but do we not want an all-season garden? And they lack the characteristic dogwood dent in the bracts, but each adds glory to the post-daffodil time. (We like C. k. chinensis the better.) One new to me, but Jack and Betsey tell me is old hat to others, is the variegated. We found this at a daylily meeting. So far, I am entranced; and it is fine here.

While considering shrubs for the brand new, small daffodil garden, there are others beyond the basics above. One blooms in mid-winter; it is *Hamamelis mollis*. A bouquet in February (in the Northeast) will astound with its delicious scent. Pussywillows have always been harbingers; the natives are so welcome; the French are bigger and pinker; the black? yet to be proven here.

The viburnums, a huge group, include a few especially for daffodil fanciers. At Larry Mains's we found one well-timed we particultly like—*V. chenaulti*. If there is room for only one, it must be *V. tomentosum mariesii*—best of all—serving in bloom and fruit a long time, beginning with the last daffodils. Quinces come in many shades, beautiful, but they must be protected from the deer.

At dogwood time, the cercis provide an early glow over the southern Appalachian hills, as do the dogwood farther north. They are splendid understory trees. Their range barely reaches Zone 5—better Zone 6. We have nursed the beautiful but tempermental *C. alba* for years; the bright Cornell pink is more reliable.

When the shad run up the rivers, the shrubs named for them bloom. We call them "shad bush;" some, "shad blow." They really are amelanchier and come in several varieties; but for nostalgia, I doubt if many of us would find space. They wander about.

The first important shrub for any daffodil gardener is unquestionably *R. mucronulatum*. As the season progresses, no shrub is more glamorous than the great P.J.M. rhododendron hybrid which blooms smack in the middle of daffodil time.

There are so many. I have named but a scrap, but these would be my first to plant in a brand new small garden, as a daffodil fancier wanting to make a landscape of my daffodils.

As we have side-tracked to list some of the best shrubs for daffodil gardens in small areas, let us not forget our "problem"—how to fit dafs among them.

I still think a good start is to let the little shrubs define the daf spots. This makes a lovely garden for a few years. But when the shrubs get too big, as they will, you must find other markers. All of those above can be trusted to stay put to serve daffodils for many years; but to supplement them, there are the steady, non-wandering perennials such as peonies, dictamnus, fall asters, and the clumping ferns, among the best of which are the polystichums—Christmas (east) and sword (west).

However, some of the most seemingly inviting ones must be spurned. Having lost daffodils by using them, I am now as leery of Siberian iris, epimedium, and hostas as I am of forsythia. The latter make splendid edgings, but must not be allowed to mingle.

PROBLEM #4. THE VERY STEEP HILLSIDE

While I did not mention this at Nashville, it is a problem that some might face that I saw effectively handled by a Society stalwart. While at our organizing meeting in 1954, my hostess said there was a daffodil planting several blocks over that we should see. It proved to be a steep hillside of paths and many flowering daffodils. Imagine my surprise when returning to our first convention in 1956 to find us being lead to that same garden and that it belonged to Willis Wheeler, then ADS Secretary.

It is what Willis had done in the intervening two years that becomes our problem-solver. His hillside was really steep. It had two natural features vital to anyone's attempting this sort of garden: it sloped towards the house and to the south.

Willis's contribution, aside from selecting a good hillside, was a whole series of small brick walls. There was nothing stiff about these walls. They almost meandered, as they conformed to the terrain—adding just enough support where needed. I thought they turned a bunch of daffodils on a hill into a hillside landscape of daffodils of distinction.

Willis's problem will be faced only by those with small urban plots. Another problem some face is

PROBLEM #5. WHAT TO DO ABOUT WATER

So that's a problem? Most are glad to have some water around, but some writers like to warn daffodil growers of its danger. There are, of course, boggy sumps, where water sits and sits all season long—true marshes, true bogs, such nefarious soils as the New Jersey Whippany near here—where no one should try any kind of narcissus, or anything else much.

Many areas, on the other hand, are gloriously flooded with water in spring and then go dry come summer. These suit narcissus to a T. Some members will recall the huge sweep of many standard cultivars blooming lustily in flooded areas at Kingwood Center at our convention in 1958. Water in spring to daffodils is the



Jumblie makes a pretty picture at the edge of the pond.

summum bonum. Recall the wetness of Holland, where the water table sits but a few inches below the surface, wet Ireland, and Oregon—the greatest areas of all. For was not Narcissus born in the water? (but I never understood the purple center.)

If you have brook, stream, river, pond, lake, or ocean, watch what happens in mid-summer; and then design a picture. We recommend the poets, because they have the briefest of rest periods, and the 6s, because they were born streamside; but the 3s also seem to fit this milieu.

Waterside demands ferns, and in the Northeast one of the best is the ostrich; the three osmundas add height, native adiantum grace, and some thelypteris a change of pace. The marsh fern and the hay-scented can be real menaces unless severe restrictions are imposed. We do use the latter across the brook where they make a "lawn" on a rock on rock lateral moraine under big sugar maples, and where absolutely nothing else will grow but the invading pioneers of the xerosphere such as brambles. The best way to prevent this natural succession and maintain the fern level we have found to be an annual burning over. But now that we are not permitted to burn, it is necessary to prune out the invaders once a year.

Many perennials are perfect for later bloom. Everyone thinks first of the stately Japanese iris. So did we. Decades of frustrating floods warn "cuidado," as the Spanish say, "Take care!" If there is any chance of flooding, out will go the Japanese iris first, in spite of heavy iron restrictions. We tried; forget.

Probably the waterside plant we have had longest and continue to enjoy while we ignore its care is *Myosotis scorpiodes*. In spite of its forbidding name, this perennial forget-me-not is an all-summer bloomer, dipping into the water, but continuing to flower and live.

Anyone with a waterfront "problem" will discover many interesting perennials demanding a trial to accompany or succeed daffodils. However, I cannot be as sanguine as regards the next problem to explore.

PROBLEM #6. THE PERENNIAL BORDER

Unlike water, a perennial border should be completely avoided if possible. It does not belong in the U.S.A. The concept was foisted on the eager American gardener early in the century, when, just emerging from the Victorian idea of beds of assorted geometric shapes scattered about lawns, Americans were told by English landscapers that they should combine them all into long borders which "stay in bloom all season."

Only after many places had been committed to "perennial borders" did it begin to dawn—I think first on English garden designers—that our climate of extremes of heat/cold and flood/drought could not accommodate such English standbys as long-blooming wallflower and other semi-hardy biennials that kept bloom

continuing in English borders.

We are among those who inherited these ideas and consider we are "stuck with" a "perennial border." For many years, I struggled to achieve a solid mass of interesting color patterns through the season. Only rarely was there a patch of satisfied accomplishment.

When daffodils came on the scene, I tried several ways to keep track of what was going on beneath soil level. One try was to chart on a six-inch grid every single daffodil bulb in a 100' × 10' border. Of course, daffodils, individualists all, rebelled. Some went this-away; others that-away. I mention this fiasco to forestall others'

trying this route.

It took an SOS from Charlie Meehan, Symposium Chairman, to teach me how to make a perennial border. At that time in ADS history, about 1958, the ADS had two assets—the Symposium and the Regional Vice Presidents. As Symposium Chairman, Charlie was distraught when he heard that the Smiths, who then had "the best daffodil collection in the U.S.A.," (Charlie sent me their list to prove it) had taken off for Japan. He appealed to me, RVP, to go to Staten Island and send him a report from their garden.

If a swallow cannot make a summer, of course one trip cannot make a Symposium Report. But that trip for Charlie taught me a lot about the way to use daffodils, not only in a border but in any landscape, which could be of more lasting

value than Charlie's Symposium—epitome for ADS that year.

At that time, both Kenneth and Catharine Hemingway Smith were internationally famous as hybridizers of three major plants—daffodils, iris, and hemerocallis. They had achieved recognition in England, through the RHS, and in the U.S.A. for their originations. It was interesting to see how they used their

collections to create a beautiful landscape.

Their place was high in the Donegan Hills of Staten Island, from which you can now see the Verrazano Narrows Bridge in the far distance. It featured borders. The main one was backed by a long row of mature hemlocks. Two things immediately caught my attention; (1) most of the daffodils were in large clumps across the back of the border while an occasional clump at the front prevented stiffness; then (2) cultivars were new and exciting ones; but instead of the sampling I thought I was lucky to have, Kenneth had patches of twenty-five to fifty blooms each. In fact, I counted 125 blooms on one of two equal clumps of Binkie. While big clumps of Binkie are no novelty today, this was when Binkie was \$9/bulb.

All of the big daffodil patches at the back were fronted by iris, at that time just pleasant groundcovers. (Incidentally, friends who visited the Smiths at iris time were surprised to learn that they grew daffodils, too. You see, the daffodil foliage, still growing strong, blended into the green hemlock background, and the tall, colorful iris were all the visitors saw.) Hemerocallis, in spring also just ground covers, were strategically placed, so that summer would find them dominating the

scene.



A border in the Kenneth Smith Garden.

What I now call the "Smith principle," that applies to all landscaping, I learned here. It is just this:

Always put early bloomers at the back. No one minds looking over the oncoming to see the flowers behind, but no one likes peering over dead early ones to see later flowers.

I wondered about those 125-bloom clumps of Binkie, and later I asked Catharine if she had replanted them. She told me she had "skimmed" them and made two more clumps of the skimmings. I tried, too. It works for a toughy like Binkie, but I lost some nice dafs trying it on the wrong ones.

There were many narrower borders about the place. These, open to view from both sides, had the daffodils down the centers, flanked by summer bloomers—same principle. As I wandered among these borders, I noticed several flowers of a nice white trumpet blooming casually along the way. This was none other than the first Empress of Ireland to come to America. Now the circle was complete: the "best collection in the U.S.A." of course included the hottest item in the century; and the top American hybridizer, who had bought it, treated it as just one more landscaping item.

PROBLEM #7. DAFFODILS BEFORE SPRING

This problem faces not only the exhibitor at a preseason show, but anyone who wants a jump on the season just for fun.

Almost any daffodil can be wheedled into bloom by contracting its natural development time by about one-and-a-half to two months. The process, which I learned from the pros in this field, has already been reported to the ADS Journal.

What cannot be done, except with the tender tazettas, is to flower daffodils in midwinter—that is in the North. They resent "forcing" in the usual sense.



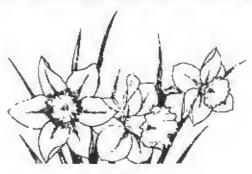
Binkie in the Smith garden.

The epitome of a preseason daffodil landscape was presented at the New York International Flower Show. The ADS had a hand in this. At our first participation in this week-long show, guests registered with us their resentment that that year there were no major daffodil gardens, as there had been in other years. We took these complaints to the right places, and the following year saw the major showpiece a great daffodil garden, while twenty other exhibits that year featured daffodils.

The ADS, with help from the Holland Bulb Growers Association, which provided 1000 bulbs; several clubs, whom we taught timing for early flowering; and friends like Grant Mitsch and Margaret Thompson, who provided types we could not flower in March, produced a week-long display already reported. [1960 ADS Yearbook.]

The major exhibit of the International Show, designed by Adrian Frylink and executed by James Jack, reinforced principles we had observed such as: do not mix. We also liked—and copied—benches made from big logs split. These are scenic, but do not last many years.

However, I do hope that Adrian or Jimmie will tell the complete story of what it takes to produce the largest week-long, preseason indoor daffodil exhibit ever.



A TWO NURSERY WEEKEND

REG NICHOLL, England

(from the Journal of the Daffodil Society [Britain] February, 1983)

What prompts one to visit a daffodil nursery—or even two? The reasons are both obvious and various; and in my case it meant a delightful drive through some of England's most charming countryside, the Cotswolds, to view the daffodils, what else, of two of the most interesting and dedicated people it has been my good fortune to be acquainted with, however slight. A solo trip is not much fun so a like-

minded companion was entreated to join me.

So it was the week-end of the Solihull Show, Eddie Jarman and I drove steadily through the aforementioned landscape to arrive on a beautifully sunny but cool Saturday afternoon at the Stourport-on-Severn home of John Lea. As luck would have it we were offered the run of the place to ourselves. This gave us the opportunity to browse through the beds of flowers at ease and assess together the respectie merits of those available, which fortunately seemed to be just about everything.

The selected seedling beds naturally enough drew us to them; and whilst to quote hordes of numbers can be a meaningless bore, I think the half dozen noted down will be of interest. Firstly, one that had been simply numbered 1/82, due to being a first flower, was superb, large, orange trumpet 1 Y-O similar in style to Gold Convention. If it continues to produce similar blooms when more plentiful it

will be a great step forward in its class.

A borderline case between 1 W-Y and 2 W-Y next took our eye. Although there were a number of bulbs of this cultivar numbered 1/20/77, one in particular had a superbly flat perianth and beautifully contrasted deep yellow corona. We were particularly impressed and thought there being such a paucity of flowers in both the above classes, it should be worth watching.

Next was 1/37/76, a large $3\frac{1}{2}$ " diameter 3 W-GWO with a crinkly orange cup and very broad white perianth; followed by an unusual small pink double, 1/31/72 which we found appealing due to its pink petaloids having a yellow picotee edge,

the like of which we had not seen before.

Finally, there were two flowers of similar coloring in that they had flat pale lemon perianths but huge, buff, heavily serrated, open cups. Belonging to the 2 Y-Y class, 1/40/75 had a slightly broader perianth than its colormate 1/50/76.

A chance to see flowers growing in masse rather than in odd vases on the show bench or stand was taken and it afforded us the opportunity of noting those that have a very high percentage of show worthy blooms. Those picked out were Balvenie 2 W-GPP, Dailmanach 2 W-P, and Oykel 3 W-Y, all fairly well known and one not quite so, Glen Clova 2 Y-ORR.

Goodbyes were said, and on we travelled to Solihull for a look round the show and to spend a convivial evening with the saffron-hued assembly still talking

daffodils.

Sunday saw us collect Ron Ffitch and set off in the direction of Letty Green. The weather once again smiled on us and we were amazed at the welter of flowers that greeted us on our arrival at Mrs. Abel Smith's.

The initial move was again toward the seedling beds; and the first flower we noted was B5/22, not so much because of its color and form, but the fact that the

pink cup had stained the perianth sufficiently so to suggest that it may be of use in the breeding of pink perianths. R3/11 × Grand Prospect next attracted our attention, it being a first class 1 Y-Y with a straight trumpet and superb flat perianth. There was also a particularly good Desdemona × April Love flower, but as yet very few bulbs. It seems April Love, of which there was an abundance of first guality blooms in the named beds, is not only an excellent flower in its own right but is passing on its best features to its descendants. We were certainly impressed with it as we put our money down and bought some of the stock. Lastly we were taken with A2/72 which was bred from Rufford × W7/21 and has a rather unusual pale orange cup with pink overtoned rim which contrasted nicely with the smooth white perianth.

Perhaps the most interesting thing we saw during our journey was the deepest pink corona any of us had set eyes on. There was just one solitary bloom in a pot in the greenhouse and it had apparently caused quite a stir with visitors from across the North Sea who were eager to purchase. It was designated LO/51 and was as the result of Knightwick being crossed with a Rima × Geisha seedling, the latter being a highly recommended Guy Wilson breeding pink, first introduced over

twenty years ago.

Picking among the flowers in the named beds for consistent show blooms in quantity found us selecting the already mentioned April Love 1 W-W, which appears to have a great future in a not too well endowed section; Park Springs 3 W-WWY, which has already made its mark, and Langford Grove 3 W-YYO, which should certainly be more widely grown.

Over a welcome cup of tea, our hostess voiced her aim to produce a short cupped pink flower, having been so nearly there with Upper Broughton; so it seems both breeders are still on the pink trail. We wish them luck in their endeavors and thank them for their hospitality.

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ADS APPROVED LIST OF MINIATURES

March, 1985

Agnes Harvey 5 W-W Angie 8 W-W

April Tears 5 Y-Y Arctic Morn 5 W-W

Atom 6 Y-Y Baby Moon 7 Y-Y Baby Star 7 Y-Y Bagatelle 1 Y-Y Bebop 7 W-Y

Bobbysoxer 7 Y-YYO Bowles's Bounty 1 Y-Y Candlepower 1 W-W Charles Warren 1 Y-Y

Charles Warren 1 1
Chit Chat 7 Y-Y
Clare 7 Y-Y
Cobweb 5 W-Y
Cricket 5 Y-Y
Curlylocks 7 Y-Y
Cyclataz 8 Y-O
Demure 7 W-Y
Doublebois 5 W-W

Elfhorn 12 Y-Y Fairy Chimes 5 Y-Y

Flomay 7 W-WPP Flute 6 Y-Y Flyaway 6 Y-Y

Frosty Morn 5 W-W

Gambas 1 Y-Y

Gipsy Queen 1 Y-WWY

Greenshank 6 Y-Y Halingy 8 W-Y Hawera 5 Y-Y Heidi 6 Y-Y Hifi 7 Y-Y

Hors d'Oeuvre 8 Y-Y

Hummingbird 6 Y-Y Icicle 5 W-W Jessamy 12 W-W Jetage 6 Y-Y Jumblie 6 Y-O Junior Miss 6 W-Y Kehelland 4 Y-Y Kenellis 12 W-Y

Kibitzer 6 Y-Y Kidling 7 Y-Y

Laura 5 W-W Likely Lad 1 Y-Y Lilliput I W-Y

Little Beauty 1 W-Y
Little Gem 1 Y-Y
Little Prince 7 Y-O
Lively Lady 5 W-W
Marionette 2 Y-YYR
Marychild 12 Y-Y

Mary Plumstead 5 Y-Y

Mini-cycla 6 Y-Y Minidaf 1 Y-Y Minnow 8 W-Y Mite 6 Y-Y Mitzy 6 W-W Morwenna 2 Y-Y Muslin 12 W-W

Mustard Seed 2 Y-Y Nylon 12 W-W Opening Bid 6 Y-Y

Pango 8 W-Y

Paula Cottell 3 W-WWY Pease-blossom 7 Y-Y

Pencrebar 4 Y-Y
Petit Buerre 1 Y-Y
Picarillo 2 Y-Y
Piccolo 1 Y-Y
Picoblanco 3 W-W

Pixie 7 Y-Y

Pixie's Sister 7 Y-Y Pledge 1 W-W Poplin 12 Y-Y Poppet 5 W-W Quince 6 Y-Y Raindrop 5 W-W

Rikki 7 W-Y

Rockery Beauty 1 W-Y Rockery Gem 1 W-W Rockery White 1 W-W Rosaline Murphy 2 Y-Y

Rupert 1 W-Y Sea Gift 7 Y-Y Segovia 3 W-Y Sennocke 5 Y-Y

Shrew 8 W-Y Shrimp 5 Y-Y Sir Echo 1 Y-W

Skelmersdale Gold 1 Y-Y

Skiffle 7 Y-Y

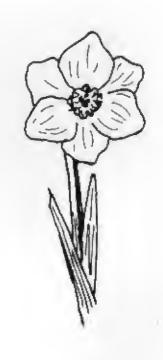
Small Talk 1 Y-Y Sneezy 1 Y-Y Snipe 6 W-W Snug 1 W-W Soltar 6 Y-Y Sprite 1 W-W Stafford 7 Y-O Stella Turk 6 Y-Y Sun Disc 7 Y-Y Sundial 7 Y-Y Taffeta 12 W-W Tanagra 1 Y-Y Tarlatan 12 W-W Tete-a-Tete 6 Y-O Tiny Tot 1 Y-Y Tosca 1 W-Y Tweeny 2 W-Y W. P. Milner 1 W-W Wee Bee 1 Y-Y Wideawake 7 Y-Y Wren 4 Y-Y Xit 3 W-W Yellow Xit 3 W-Y Zip 6 Y-Y

pseudo-narcissus subsp. alpestris W-W
pseudo-narcissus subsp. bicolor W-Y
rupicola Y-Y
scaberulus Y-Y
tazetta subsp. bertolonii Y-Y
* tenuior W-Y
**triandrus albus W-W =
triandrus var. triandrus
triandrus Aurantiacus Y-Y
triandrus cernuus W-W
triandrus concolor Y-Y
triandrus loiseleurii W-W
triandrus pulchellus Y-W
watieri W-W
willkommii Y-Y

× = wild hybrid
 ** = as listed in 1969 Classified
 List and International
 Register of Daffodil Names

DIVISION 10

asturiensis Y-Y atlanticus W-W bulbocodium (various) Y-Y **bulb. tananicus W-W = cantabricus tananicus calcicola Y·Y Canaliculatus W-Y cantabricus (various) W-W cvclamineus Y-Y × dubius W-W Eystettensis Y-Y (double) fernandesii Y-Y gaditanus Y-Y hedraeanthus Y-Y ionauilla Y-Y jonquilla Flore Pleno Y-Y jonquilla henriquesii Y-Y ionguilla var. minor Y-Y jonquilloides Y-Y juncifolius Y-Y **× macleayii W-Y = × incomparabilis minor (various) Y-Y minor var. pumilus Plenus Y-Y (Rip van Winkle)



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- March 9-10—Corona del Mar, California. Southern California Daffodil Society and the Sherman Foundation at the Sherman Gardens, 2647 East Pacific Coast Hwy. Information: Mrs. A. E. Cameron, 410 South Paseo Estrella, Anaheim, CA 92807.
- March 9-10—Clinton, Mississippi. Mississippi State Show. Central Mississippi Daffodil Society at the Hall of Fame, B. C. Rogers Student Center, Mississippi College. Information: Dr. Ted Snazelle, 418 McDonald Drive, Clinton, MS 39056.
- March 13-14—Dallas, Texas. Southwest Regional. Texas Daffodil Society at the Dallas Civic Garden Center, Information: Mrs. Charles T. Semos, 4032 East Amherst, Dallas, Texas 75225.
- March 16-17—Walnut Creek, California. Northern California Daffodil Society at the Heather Farms Garden Center, Ygnacio Valley Road and N. San Carlos Drive. Information: Bob Spotts, 3934 LaColina Road, El Sobrante, CA 94803.
- March 22-23—Atlanta, Georgia. Southeast Regional. Georgia Daffodil Society at the Shannon Mall. Interstate 85 and Georgia #138, Union City, Georgia. Information: Ralph Bullard, 6159 Ridge Way, Douglasville, GA 30135.
- March 23-24—LaCanada, California. Southern California Daffodil Society at the Descanso Gardens, 1419 Descanso Dr. Information: Mrs. Don Christensen, 1703 Fletcher Avenue, South Pasadena, CA 91030.
- March 23-24—Fortuna, California. Pacific Regional. The Fortuna Garden Club at the Fortuna Monday Club House, Sixth and Main Sts. Information: Mrs. Christine Kemp, P. O. Box 212, Fortuna, CA 95540.
- March 23-24—Conway, Arkansas. Arkansas State Show. Arkansas Daffodil Society at the Hendrix College Campus, Hulen Hall. Information: Mrs. J. C. Dawson, 367 Donaghey Avenue, Conway, AR 72032.
- March 30—Princess Anne, Maryland. Somerset County Garden Club at the Peninsula Bank of Princess Anne. Information: Mrs. Chester Snyder, 48 Beechwood Street, Princess Anne, MD 21853.
- March 30-31—Chapel Hill, North Carolina. Garden Council of Chapel Hill and Carrboro and the North Carolina Botanical Garden, Totten Center, North Carolina Botanical Garden. Information: Dr. Elise Olsen Cheesborough, 109 Carolina Forest, Chapel Hill, NC 27514.
- March 30-31—Hernando, Mississippi. Southern Regional. The Garden Study Club of Hernando at the National Guard Armory, McCracken Road. Information: Mrs. Barry M. Carter, 4671 Highway 304, Hernando, MS 38632.
- March 30-31—Memphis, Tennessee. The Merry Weeders Garden Club and the Mid-South Daffodil Society at Goldsmith Civic Garden Center, 7050 Cherry Road. Information: Mrs. Fred L. Bradley, 3742 Guernsey Ave., Memphis, TN 38122.
- April 2—Onancock, Virginia. The Garden Club of Eastern Shore at The Hermitage, North Street. Information: Mrs. Edward A. Ames III, Fairfield, Box 177, Onancock, VA 23417.
- April 6-7—Hampton, Virginia. Tidewater Daffodil Society at the Hampton Holiday Inn, 1815 West Mercury Blvd. Information: H. deShields Henley, 115 Conifer Road, Newport News, VA 23606.
- April 6-7—Nashville, Tennessee. Middle Tennessee Daffodil Society at Cheekwood, Tennessee Botanical Gardens and Fine Arts Center. Information: Mrs. Alex Taylor, Rt. 6, Pinewood Rd., Franklin, TN 37064.

- April 11-12—Lawrence, Kansas. Countryside, Green Thumb, Lawrence Prairie Acres, and Meadowlark Garden Clubs and The Daffodil Club at the Arts Center, 9th and Vermont Streets. Information: Mrs. Vernon E. Carlsen, 811 Sunset Drive, Lawrence, KS 66044.
- April 12—Scottsburg, Indiana. Indiana Growers South at the Finley Fire House, Hwy. 56 at Leota Road. Information: Mrs. Verne Trueblood, RFD 3, Box 187A, Scottsburg, IN 47170.
- April 13-14—Gloucester, Virginia. Garden Club of Gloucester at the Gloucester Intermediate School, Route #17. Information: Mrs. Robert L. Trimpi, Box 672, Gloucester Point, VA 23062.
- April 13-14—Dayton, Ohio. Southwest Ohio Daffodil Society at the Wegerzyn Garden Center, 1301 E. Seibenthaler Avenue. Information: Mrs. William J. Newill, 10245 Virginia Lee Drive, Dayton, OH 45459.
- April 13-14—Edgewater, Maryland. London Town Public House and Gardens Show, 839 London Town Road. Information: Mrs. R. Gamble Mann, P. O. Box 176, Edgewater, MD 21037.
- April 16—Chillicothe, Ohio. Adena Daffodil Society at the Veterans Administration Medical Center, Building No. 9. Information: Mrs. Goldie Vernia, 525 Seminole Road, Chillicothe, OH 45601.
- April 16-17—Louisville, Kentucky. Kentucky Daffodil Society, The Louisville Galleria. Information: Mrs. Wynant Dean, 1629 Cowling Avenue, Louisville, KY 40205.
- April 18—Indianapolis, Indiana. Indiana Daffodil Society at the Meridian Street Methodist. Church, 5500 North Meridian. Information: Mrs. Atwood S. Moore, 5233 Brendonridge Road, Indianapolis, IN 46226.
- April 18—Upperville, Virginia. Upperville Garden Club at Trinity Parish House. Information: Mrs. William Tayloe, Route #1, Box 205, Middleburg, VA 22117.
- April 18—Summit, New Jersey. Northeast Regional. New Jersey Daffodil Society at Calgary Episcopal Church. Information: Mrs. R. Kendall Nottingham, 393 Charlton Avenue, South Orange, NJ 07079, or Mrs. David Watts, 30 Wildwood Lane, Summit, NJ 07901.
- April 20-21—Washington, D. D. Mid-Atlantic Regional. Washington Daffodil Society, at the U. S. Botanic Garden Conservatory, Maryland Avenue and First Street, S. W. Information: Miss Delia Bankhead, 489 Arnon Meadow Road, Great Falls, VA 22066.
- April 20-21—Columbus, Ohio. Midwest Regional. Central Ohio Daffodil Society at the Upper Arlington Municipal Services Center, 3200 Tremont Road. Information: Mrs. James Dietsch, 5192 Bagley Road, Columbus, OH 43227.
- April 24-25— Baltimore, Maryland. Maryland Daffodil Society at the Brown Memorial Woodbrook Presbyterian Church, 6200 N. Charles at Woodbrook Lane. Information: Ms. Anne Donnell Smith, 8609 Stevenson Road, Stevenson, MD 21153.
- April 25-27—King of Prussia, Pennsylvania. National Show. Delaware Daffodil Society at the Holiday Inn of Valley Forge, 260 Goddard Blvd. Information: Mr. & Mrs. W. R. Mackinney, 535 Woodhaven Road, West Chester, PA 19380.
- April 29-30—Nantucket, Massachusetts. Nantucket Garden Club at the "Meeting House," Harbor House, N. Beach St. Information: Mrs. Malinda Lucas Geddes, 146 Main St. Nantucket, MA 02554.
- April 30—Greenwich, Connecticut. New England Regional. Greenwich Daffodil Society at the Greenwich Boys' Club, Horseneck Lane. Information: Mrs. Clarke T. Randt, Husted Lane, Greenwich, CT 06830.

April 30-May 1—Chamberburg, Pennsylvania. Pennsylvania State Show. Chambersburg Garden Club at the First Luthern Church, 43 W. Washington Street. Information: Mrs. Owen Hartman, 105 Farmington Road, Chambersburg, PA 17201.

April 30-May 1—Cleveland, Ohio. Western Reserve Daffodil Society at the Garden Center of Greater Cleveland, 11030 East Blvd. Information: Wells

Knierim, 31090 Providence Road, Cleveland, OH 44124.

May 4—Akron, Ohio. Northeast Ohio Daffodil Society at Rolling Acres Mall, 2400 Roming Ave. Information: Jack Ward, 1743 Lafayette Circle, Stow, OH 44224.

- May 4-5—Mansfield, Ohio. Kingwood Daffodil Society at the Exhibit Hall, Kingwood Center, 900 Park Avenue, West. Information: Charles Applegate, Route 2, Box 163, Perrysville, OH 44864.
- May 4-5—St. Paul, Minnesota. Central Regional. Daffodil Society of Minnesota at the Har-Mar Shopping Mall, St. Paul. Information: Mike Heger, 8015 Krey Avenue, Waconia, MN 55387.
- May 7—South Bend, Indiana. Northern Indiana Daffodil Show at the University Park Mall. Information: Charles Wheatley, P.O. Box 150, Mongo, IN 46771.
- May 10-11—Dublin, New Hampshire. Northern New England Daffodil Society at the Town Hall. Information: Mrs. William Barker, Dublin, New Hampshire 03444 or Mrs. E. H. Eggers, High Shadows, R.F.D. 2, Sharon, NH 03458.

POETS AND PRODUCE

MEG YERGER, Princess Anne, Maryland

In the early twentieth century, the poeticus type of daffodil was in such demand as a cut flower that it rivaled the yellow trumpet in popularity even for street corner sales. For home gardeners and commercial growers there was much written on the cultural preferences for that type of daffodil. One author, Rev. S.E. Bourne, wrote in 1903 that it was desirable to get poeticus varieties into the ground by the end of July, saying, "Early planting is, there can hardly be a doubt, essential if the best results are to be secured." He encouraged leaving them in the ground at least two seasons unless they were not doing well and "in the matter of lifting better be too early than too late. . . Some of the varieties have no period of bulb rest. . ."

The affinity for early lifting with immediate replanting works out efficiently for companion planting with vegetables. The beauty and fragrance of the poeticus can be enjoyed in spring, then a living mulch of vegetable plants can keep the bulbs cool

all summer and provide tasty produce for the picking!

Foliage from vegetables such as Lacy Lady bush peas, Rutgers tomatoes which like to crawl, Blue Lake bush beans, Bush Charleston Gray and Bush Jubilee watermelons, and peppers can provide summer mulch. Poeticus plantings adapt well to such double use of a plot used for vegetables because of a preference to be dug before the foliage has lost all its green. Observation in a Maryland Eastern Shore garden confirms the fact that poeticus do have a very short rest period for the roots. A great many different poeticus cultivars dug between Memorial Day and mid-June in 1984 had old roots still active on almost all of them. On a very few the new roots had begun to appear while the old roots were still there. Those new roots were as fragile and translucent as the tentacles of a sea nettle and would have

died if not put into a gentle environment at once. That is why no harm is done if they are moved from one place to another in the same garden—or even into a can of friable soil for immediate transfer to a friend's garden. The normal bloom time for a cultivar seems to control the time for emergence of new roots. For instance Felindre, the very late bloomer, had no sign of new roots when dug the end of June. The propensity for early maturity allows double use of the plot when vegetable crops suitable for late planting are selected.

In the raised bed of the Maryland poeticus/vegetable garden referred to earlier, ten-inch wide rows running north and south alternate with eight-inch strips of loose-laid brick foot-paths to avoid packing of soil. From time to time the positions of the bricks and the dirt strips can be reversed to provide a change of soil much as was done in medieval times when it was the custom to let fields lie fallow.

To start this planting design all bulbs were dug then replanted at once three or four inches apart right down the center of the ten-inch strip. Seeds of vegetables were spaced six or eight inches apart near each edge. Some strips were left vacant of bulbs so as to receive new poeticus as they arrive with bulb orders. Planned positioning of vegetable seeds left a center aisle for a bulb behind a bulb, a bulb before a bulb, a bulb between two bulbs and so on as in the childhood tale of the ducks. A temporary protection against birds, squirrels, cats, wandering dogs, and even humans was provided by sheets of half-inch wire mesh propped on the brick walks and the bulb markers until sprouting vegetable foliage grew enough to touch it. In a couple of weeks the living mulch was well along and in not many more weeks produced food. Gardeners in other areas may work out adaptations to this system to suit their own needs and seasons.

The matter of fertilizing works out compatibly. Most of the vegetable crops selected don't want nitrogen because it tends to produce many leaves and little fruit. The 2-20-20 fertilizer used for daffodils works well enough for good vegetable yield. Water for the crops in the well-drained raised beds keeps daffodil roots growing well in all seasons which is important because of the almost continuous growth habit of poeticus.

When the harvest from the food crops is over, the vegetable plants must not be pulled out by the roots lest the bulbs be disturbed. Top growth should be cut off at the soil line. It can be put into the compost bin for future use as mulch or soil additive. Usually, grass and chopped leaves from the year's final lawn mowing are thrown on for winter protection and eventual incorporation into the soil and through the winter hardwood ashes from the fireplace are sprinkled over as they become available. Dreams of poets and produce of the next year are in the minds of gardeners sitting by that winter fire.

We are prepared, my love and I, For winter on a hill: I stored a theme of song, and she A root of daffodil.

-Edwin Quarles



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CONVENTION 1985

BETTY P. KRAHMER, Wilmington, Delaware

"Convention 1985" with all its activities will soon be with us. And, what activities they will be—from Wednesday, April 24 through Saturday, April 27! Show entries may be entered from 3 PM on Wednesday until 10 AM on Thursday, Exhibitors are requested to make reservations for all collections of over five stems with the Staging Chairman; Mrs. Robert Weeks, 2306 Jamaica Drive, Wilmington, DE 19810. Tel: 302-475-7238.

If you are flying to the convention, use the Philadelphia Airport, The limousine service which serves the Holiday Inn of Valley Forge is Liberty Limousine.

Thursday, the show will be open to the public from 2 PM until 9 PM. There will be a Board of Directors meeting at 3 PM. Dinner that evening will be followed by the

annual meeting of the Society and the awards presentations.

On Friday, the show will be open until 5 PM. The special breakfasts, Hybridizer and Miniature, will be held at 7:30 AM. (If you wish to attend one of these, please register and pay for it at the time you register at the Convention.) The morning Symposium will include Theodore Snazelle, Ph.D. giving "Daffodil Diseases and Pests, Part II" and Mrs. Hubert Bourne on "Writing and Interpreting a Show Schedule." In the afternoon, we will hear Martin Mathes, Ph.D, on "Micropropagation of Daffodils Using Tissue Culture Methods," followed by a Judges' Refresher Course in the form of a skit. Sir Frank Harrison will speak to us after dinner.

Saturday will bring an early morning departure to visit Longwood and Winterthur with lunch in the new Longwood facility. We will return to the hotel in time for a meeting of the new Board of Directors at 4 PM.

Following the gala dinner in the evening there will be a stupendous auction which is guaranteed to present highly desirable objects in a quick paced and outstanding fashion. We have been extremely fortunate to obtain the services of a renowned raconteur as our auctioneer. What a fitting climax to what we think will be an outstanding 1985 Convention and Show!



Daffodils dot the hillside above the conservatory of the Winterthur Museum and Gardens.

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THE DAFFODIL SOCIETY



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TISSUE CULTURE AND THE MICRO-PROPAGATION OF DAFFODILS (1)

I. Methods

Martin C, Mathes (2)
Department of Biology
College of William and Mary
Williamsburg, Virginia

Modern technology has resulted in a wide range of economic and aesthetic contributions to society. These advances, in the area of plant biology, have expanded our understanding of the development and physiology of plants. The vision of Haberlandt (12) coupled by the dramatic discoveries of Skoog and Miller (13), provided a firm foundation for the rapid development of methods for the aseptic manipulation of isolated plant parts. Initially, studies were directed toward the documentation of a variety of sterilization procedures, media components. environmental influences and hormone balance. These programs provided a bewildering diversity of parameters which, for example, resulted in the formulation of a large number of diverse media for the growth of tissue from individual species. Workers also found that the addition of coconut milk sustained rapid tissue growth and the form of nitrogen influenced the differentiation process. Results in this area of basic research offered obvious potentials for the development of standard methods for the rapid vegetative propagation of many woody and herbaceous plants. Dr. T. Murashige (8), was among the first scientists to develop standardized media and conditions for the controlled, directed differentiation of plantlets in culture systems. Basic research and a new practical emphasis informing the commercial producers—emerged as a significant consideration. The relative ease of operations, the standardization of media, and the recognition of a potential market for tissue culture supplies have provided the impetus of the application of the basic technology to a wide variety of plants.

Detailed reviews (9,14,15) and general articles have formed a heuristic background for the exploration of individual groups of plants. The basic premise is that cells, capable of division, from all plants may be grown in the laboratory—if the cultural conditions, sometimes very exacting, can be determined. This working hypothesis has been substantiated using hundreds of monocot and dicot species, herbaceous and wood representatives, and cells from pollen grains to leaf mesophyll layers. Gautheret (1) produced an early compendium which stimulated the emergence of this new discipline. Philip White (2) recognized the importance of a comprehensive international symposium and focused in on the areas of plant tissue culture. The clear, repeated demonstration that plant cells could be manipulated to produce new plants in culture further emphasized the unlimited potential for the research investigator and the plant propagator. This totipotency resulting in the production of genetically identical plants lead to a series (3) of discussions designed "to establish the current status of higher plant propagation through tissue culture in terms of research accomplishments, commercial applications, and future needs." Topics, including principles of rapid propagation,

⁽¹⁾ This study was funded by a grant by the American Daffodil Society. Figure 1 and additional portions of tables published by permission of Avery Publishing Group. Encouragement provided by Dr. John. Tarver and assistance provided by Ruth Uveges were greatly appreciated.

⁽²⁾ Professor of Biology

tissue cultures of ornamentals and flowers, and embryoid formation in cells derived from vegetative plant tissues, were discussed in the 1978 symposium which blended practical and experimental considerations. A second symposium which included a practical emphasis (6) and emerging technologies and strategies, was held in 1981. Topics ranging from in vitro cloning systems to modification of research procedures for commercial propagating systems and the legal aspects of plant tissue culture and patents were discussed. The program stressed three primary areas—new applications of tissue culture technology, factors influencing the growth and development of cultured cells and tissues, and problems which limit the further application of current tissue culture technology. The manipulation of isolated cells produced plants which illustrated newly acquired characteristics (such as salt tolerance) and further substantiated the potential for the mass production of large numbers of vegetatively produced (clonal) plants. In a number of cultures, these clonal plants have their origin in the process of somatic embryogenesis (embryos form in the absence of sexual fusion) and can produce thousands of small plants in each culture dish. We are just beginning to realize the potential of superimposing the emerging technologies of gene engineering and plant tissue culture.

Shoot tips (meristem) may also provide a source of isolated tissue which can produce plantlets. These cultures, initiated using small meristem tissue explants, include the actively growing apex which can form multiple shoots in culture. The discovery that a significant number of cultured tips from virus-infected plants were virus-free lead Morel and Martin (4) to report the production of the first virus-free tissue culture plants (dahlia). These techniques add to the economic potential of tissue culture methods and have been applied to a wide variety of plants, including

daffodils.

I would like to outline the basic procedures and considerations involved in establishing a tissue culture laboratory and performing basic experiments exploring micropropagation of daffodils.

A—Laboratory. The laboratory should involve two basic areas—a preparation room and a culture room. These areas (Figure 1) should have an entrance with two doors (providing an air-lock) which reduce the flow of dust and air currents. Precautions, such as clean clothing and shoes, and air conditioning (provides a slight positive pressure) should further reduce contaminating air particles. Chemical storage, dishwashing, media preparation, and sterilization should be accomplished in the laboratory area. Adequate lighting and shelves for media storage and a supply of glassware should be centrally located. A clean laboratory will reduce the bacterial and fungal contamination of tissue culture media and explants.

The culture room should have an adequate electrical supply, minimal dust, and a system of temperature control in the range of 25-28°C. The cultures should be grown on lighted shelves (perforated for air flow) with variable light intensity (remove bulbs, alter distance) and photoperiod (timer for sequential lighting). The lighting system (usually fluorescent) should compensate for the generation of an additional heat load from ballasts, etc., and provide intensities in the range of 100 to 3000 fc. (1000-30,000 lux) with a light period of approximately sixteen hours.

The transfer chamber can vary from a small table-top box with a transparent viewing area and openings for hands, to a commercial laminar flow hood. In both cases, the primary concern is to provide a working surface which is not exposed to dust particles or air currents. Dust and contaminating spores may be removed by wiping hands and surface with disinfectant (Table 1) solution. All equipment (Table 2) should be relatively dust-free.

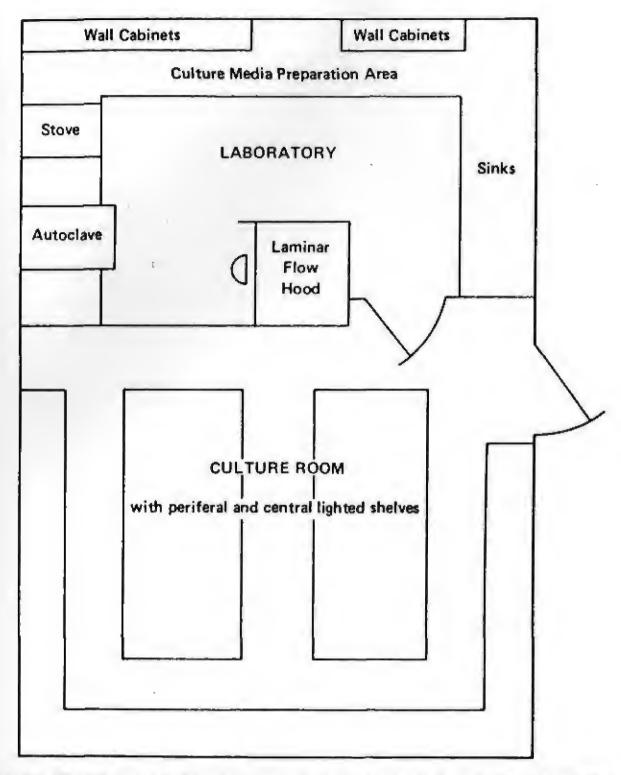


Figure 1. Floor plan of a small *in vitro* propagation laboratory and adjacent culture room. The laboratory is somewhat protected from drafts and outside dust and dirt by its inside entrance. The normal flow of materials and operations will be from the washing area counterclockwise toward the most protected sterile transfer area.

B—Media Preparation. Glassware used in media preparation should be clean and rinsed with distilled water. A wide range of culture containers—including small bottles, test tubes, baby food jars, petri dishes, and pre-sterilized disposable plastic containers—may be used. Distilled or deionized water should be used for all media, and reagent grade chemicals should be purchased. A great variety of premixed powdered media are available from biological suppliers (Table 3). The medium should have a pH (acidity—Table 4) of between 5.0 and 6.0. Certain media have a pre-adjusted pH while others must be checked and altered with hydrochloric acid or sodium hydroxide. Test papers or a pH meter may be used to determine the pH of culture media.

Table 1. Surface Sterilization

Some Commonly Used Disinfectants

Disinfectant (1)	Concentration	Exposure Time
Sodium hypochlorite (2)	0.5%-5%	5.20 minutes
Ethyl alcohol	75%-80%	Several seconds- Several minutes
Benzalkonium chloride (3)	0.1%-0.01%	5-20 minutes
Hydrogen peroxide	3%	15-30 minutes
Mercuric chloride	0.1%	20-30 minutes

(1) These chemical are toxic and/or irritants. Use cautiously. All residues should be removed by rinsing at least three times with sterile water.

(2) Laundry bleach is usually approximately 5% sodium hypochlorite; calcium hypochlorite (chlorinated lime) also works well.

(3) Zephiran, BTC, Roccal.

Table 2. Laboratory Equipment

- 1. source of distilled or deionized water
- 2. refrigerator
- 3. stove or hot plate
- 4. sterilizer-pressure cooker or autoclave
- 5. acidity testing paper or meter
- 6. glassware—beakers, Erlenmeyer flasks, graduated cylinder, graduated pipettes.
- 7. balance
- 8. culture containers—bottles or dishes
- 9. aluminum foil, razor blades, forceps
- 10. magnifer or microscope
- 11. alcohol burner
- 12. oven
- 13. sterilizing filters and faucet aspirator

All culture containers and media must be sterilized. In general, media and additives may be sterilized by exposure to high temperature (121°C) for a short period (fifteen minutes). These conditions are obtained at elevated steam pressures (fifteen pounds per square inch). Certain containers cannot withstand exposure to these high temperatures. Glassware and laboratory equipment can be dry sterilized in an oven (160-180°C for ninety minutes) while certain media components (destroyed by high temperature) may be sterilized by filtration using 0.2 micron disposable pre-sterilized plastic filters. All sterile materials must be protected from dust and air currents. Individuals cannot be too careful. A variety of hormones (Table 5) and media additives will be specified—depending on the medium (solid agar or liquid), the direction of development (roots, shoots, callus), and the source of plant materials.

The culture medium usually contains trace elements, major minerals, one or more soluble vitamins, an energy source (usually sucrose), and growth regulators (in appropriate proportions and concentrations). A basic medium used to support the extended growth of isolated plant parts was developed by Murashige and Skoog (Table 6) in 1962 and has been used extensively in a wide variety of studies. Variations in the phosphorous, potassium and nitrogen levels have been suggested for use with specific plants. Pure water (distilled or deionized) should be

Table 3. Media Types

Medium (1)

Species

Salt Bases

(1) Gamborg B.5, (2) Gamborg-Miller-Ojima, (3) Heller, (4) Knudson, (5) Kitsch and Kitsch, (6) Vacin and Went, (7) White

Murashige and Skoog

(A) Microelement, (B) Macroelement Minimal organic shoot multiplication-

A, B, C

Shoot-Tip Rooting

Multiplication

Asparagus

Gerbera, Begonia, Crassula, Dracaena, Cordyline, Scindapsus, Cattleva, Lily,

Poinsettia, African Violet, Syngonium, Tupidanthus

Pretransplant Gerbera, African Violet, Syngonium,

Cordyline, Scindapsus, Dracaena, Crassula,

Kalanchoe

Starting Scindapsus, Syngonium, Cordyline,

Dracaena

Callus Initiation Carrot, Tobacco

Shoot Development Carrot, Tobacco

Anderson (1) Starting (2) Multiplication Rhododendron

(3) Pretransplant

Multiplication Cape Sundew

Pretransplant Cape Sundew

(I) Media available from Carolina Biological Supply, Burlington, N.C., 27215

Table 4. Measurements

1 gram =1000 milligrams (mg)

1 mg = 0.001 gr

1 microgram = 0.000001 gram

1 gram = 1000 parts per million (ppm)

1 pound = 454 grams 1 ounce = 28.35 gram

1 liter = 1000 milliliters (ml or cc)

1 ml = 0.001 liter

1 microliter = 0.000001 liter

1 liter = ___ 1.06 quarts 1 fluid ounce = 29.6 ml

1 guart = 0.946 liter

> acidity pH 7.0 Neutral - lower values acid

(0.7)

temperature (°F.-32) × 5/9 = °C

Table 5. Growth Regulators

Name	Stock Solution A Preparation	abbreviation Comments
I. Auxins Indole-3-acetic acid Indole-3-butyric acid Alpha-napthaleneacetic acid 2,4 dichlorophenoxyacetic acid	Dissolve (1) 100 mg IAA in 5 ml 0.4% sodium hydroxide and bring to a volume of 100 ml	M.W. IAA (175)A natural auxin, IBA (203) unstable. NAA (186)Stable. 2,4D (221)Strong, stable.
II. Cytokinins, adenine Benzyladenine (6-benzylaminopurine) Kinetin (6-furfurylaminopurine)- Dissolve (1) Isopentyladenine mg KIN in 5 (dimethylallyl-aminopurine 1/100 dilutio concentrate Adenine sulfate hydrochloric and bring to		BA (225) KA (215) DMAA (203)A natural cytokinin, Ad-SO4 (230)Weak cytokinin activity.
III. Gibberellins Gibberellic acid A3		GA3 (346)May promote growth, sometimes inhibits bud initiation.

(1) stirring with slight heat may be required to dissolve

placed in a clean container, and the appropriate (prepackaged) salts are added with stirring. Supplements (growth regulator, stock solutions, etc.) are added and the medium is made to volume (usually one liter) usually after the addition of agar (0.8 to 1%). The medium is sterilized and poured into sterile containers or poured into containers prior to sterilization. Culture dishes or bottles should be loosely sealed with a cap or plug (cotton or foam) and covered with aluminum foil extending down the side of the container. These partial closures reduce evaporation while allowing gas exchange. If the media becomes contaminated, the containers should be sterilized before opening. This will kill all spores and eliminate a potentia source of additional laboratory contamination.

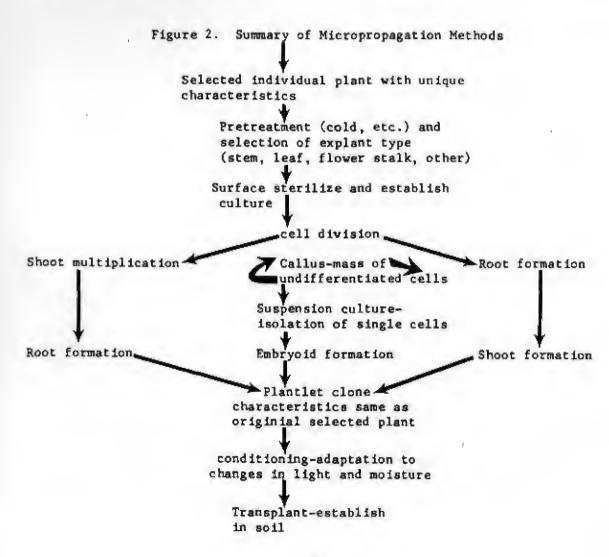
C—Explant Selection and Preparation. Flick, Evans, and Sharp have listed (5) plants, of agricultural interest, which have been regenerated from tissue cultures. This listing includes fifty-nine species and varieties (tobacco, tomato, etc.) in a single family, Solanaceae; an additional 104 dicot plants; sixty-two monocots with members of the lily family, including Narcissus; and a total of 298 references to scientific articles. A wide variety of plant parts—leaves, roots, stems, pollen—can serve as the initial explant. The isolated tissues must be capable of active growth and therefore not in the dormant condition.

Plant materials, selected as a source of explants (Figure 2), must be surface sterilized. A variety of sterilizing agents (Table 1) have been used in a wide range of concentrations, combinations, and contact periods. Tissue injury must be minimal while microbe toxicity should be absolute. In general, tender non-woody plant parts will require minimal exposure to sterilizing agents. In certain cases, enclosed

Table 6. Listing of the Components of Murashige and Skoog's Medium

Chemical Name	Chemical Symbols	Quantity per Liter
A. Macronutrients		
Ammonium nitrate	NH4NO3	1.65g
Potassium nitrate	KNO3	1.90g
Calcium chloride dihydrate	CaCk2H2O	0.449
Magnesium sulfate 7 hydrate	MgSO4.7H2O	0.37g
Potassium dihydrogen phosphate	KH2PO4	0.17g
B. Iron source (2)		
Ferous sulfate 7 hydrate	FeSO4.7H2O	27.8mg
Disodium EDTA (1)	Na ₂ EDTA	37.3mg
C. Micronutrients		
Boric acid	H ₃ BO ₃	6.2mg
Manganous sulfate 4 hydrate	MNSO4.4H2O	22.3mg
Zinc sulfate 4 hydrate	ZnSO4.4H2O	8.6mg
Potassium iodide	K1	0.83mg
Sodium molybdate dihydrate	Na2MoO4.2H2O	0.25mg
Cupric sulfate 5 hydrate	CuSO45H2O	0.025mg
Cobalt chloride 6 hydrate	CoC12.6H2O	0.025mg

- (1) EDTA is the abbrevation for ethylenediaminetetraaceticacid.
- (2) Usually added from a more concentrated solution; iron stock solutions should be stored in an amber bottle or darkness.



plant structures (buds, bulbs, etc.) will be internally sterile and require only the aseptic excision of the sterile tissue. For ease of operation, the external surface is sterilized to reduce possible contamination of internal tissues. The efficiency of sterilization is increased by the addition of a surface active agent (detergent) to the sterilizing solution. The general procedure involves the submersion of the explant tissue in the sterilizing solution (containing a few drops of wetting agent) for a short time and then washing away the toxic residue with three rinses of sterile water. In certain instances, where sterilization is difficult, a repeated treatment (after one or two days) will produce sterile explants. Disinfectant damaged portions, i.e. ends of stem sections, should be removed prior to placing the sterile explants on the tissue culture medium. All surfaces, container, forceps, cutting tools, and solutions which contact the explants should be sterilized and air currents (open doors, sneezes) must be minimal during the tissue sterilization procedure. Forceps and razor blades may be sterilized by storing in alcohol and burning off the excess sterilant. Contaminated explants and cultures should be autoclaved prior to disposal. Sterile explants should be placed onto the surface of agar medium, the culture container should be appropriately sealed and placed on the growth chamber shelves. Depending on the medium and cultural conditions, the explants may undergo a series of developmental changes which may result in the development of roots or shoots or embryo-like (embryoid) structures. Murashige has proposed a defined sequence of three major steps (Stages I, II, and III) in the developmental process. The generalized stages begin with the establishment of the culture—selection and sterilization of the explant, placement on appropriate medium for subsequent growth. Stage II is the multiplication phase which involves a rapid increase in cell division and shoot proliferation. The tissue may be subdivided, placed on fresh medium and recycled until the desired number of plantlets is obtained. Stage III involves root development and conditioning to gradual exposure to higher light intensity and lower humidity. This pretransplant phase is continued until independent plants can be grown in potting medium and placed in the greenhouse environment. Culture equipment and supplies are listed in Table

The pioneers in plant tissue culture (11) had a far-reaching insight as indicated by Haberlandt who stated "the technique of cultivating isolated plant cells in nutrient solutions permits the investigation of important problems from a new

experimental approach."

Investigation involving the factors which control the origin of small plantlets from small pieces of isolated plant tissue have lead to the wide use of these techniques in the scientifuc and applied communities. Tissue culture plants can be produced rapidly using a small amount of space and relatively simple techniques, and exhibit a genetic uniformity lacking in seedlings. Unique applications involve the production of crop plants with improved yields, disease resistance, and new hybrids formed from the fusion of cells (protoplasts) in culture. Genetic engineering (acquiring specific conditions) seems to offer endless possibilities for the improvement of plants.

This brief introduction and outline of methods can be supplemented by exploring the development of isolated plants (carrot (10), African violet, Boston fern, or Cape sundew) using a variety of commercial kits (Table 7) or rapidly multiplying living cultures which can also be purchased. Excellent guides (7,16) list

the steps and considerations for successful cultures.

The second portion of the micropropagation of daffodils will involve the experimental phase and will employ the general methods as outlined in this paper.

Table 7. Tissue Culture Equipment and Supplies

ltem	Price Range	Item	Price Range
Tissue Culture Kits	12-45	Fluorescent Stand	27
Living Cultures	5	Automatic Timer	19
Media	3-45	Hot Plate	50
Agar	45	Magnetic Stirrer	70
Auxins	4-10	Balance	40
Cytokinins	7-25	Mason Jars	1
Vitamins	3-28	Alcohol Lamp	5
Gibberellic Acid	8	Wide-Mouth Bottles	5 5
Charcoal	25	Beakers	5
Sterile Distilled Water	6	Graduated Cylinders	5
Detergent	12	Volumetric Flask	20
Forceps Set	16	Test Tubes	4
Scalpel Set	12	Disposable Plastic Filter Units	8
Light Meter	65	Pipettes	8 5 2
Laminar Flow Unit	1400	Petri Culture Dish	2
Shaker-Orbital with Platform	625	Thermometer	10
		pH Test Paper	11
Microscope-Dissecting	330	Parafilm	11
Magnifier	25	Wetting Agent	6
Razor Blades	5	Surgical Gloves	4
pH Meter	165	Disinfectant	6
Label Tape	2	Test Tube Rack	1

 All items may be purchased from Carolina Biological Supply, Burlington, N.C. 27215. Listing of an individual supplier or item does not represent an endorsement. Specific prices may vary.

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My enlarged catalog will be released earlier this year in April. If you did not order last year, I urge you to request one now so your free copy will be received promptly. If you desire the 1985 descriptive catalog, please write to the address below.

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BEGINNER'S CORNER

PETER RAMSAY, Hamilton, New Zealand

When I wrote a few mildly critical remarks about "Beginners' Corner" last year, I cautioned myself that critics often end up getting jobs. But how was I to know that the charming author of this column (can a corner be a column?) would be one of our guests at Springworld? And how could I refuse her gentle request for a guest spot in this space, given earlier circumstances? So here, as in marriage, for better or worse, is my response to Frances's request. Before I begin let me tell you of one piece of advice your regular writer gave to me. I am to operate on the KISS principle. Now, at my age I am usually more than happy to follow such suggestions. However, I am disappointed to have to record that in this instance KISS is an acronym from the management field, meaning "Keep it Simple." You may work out the final S once you've read what follows.

I intend to keep my remarks to two areas which are not unrelated—foliage and water. My comments will be fairly basic; for those of you who wish to learn more I have appended a brief reading list. A couple of years ago I wrote an article entitled "Equation: Good Foliage Equals Good Bulb Equals Good Flower." Now of course growing daffodils is not as simple as sums—we all know that lovely plump bulbs often produce the kind of nicked monsters that my wife rejects from twenty yards away. And sometimes, scrawny little things turn up trumps—look at Gay Challenger as a case in point. As my friend, Graham Phillips, has said, this particular cultivar produces the best flower return per bulb weight of any daffodil currently grown! For all that, I believe my equation, whilst not exact, is a useful one for beginners to keep in mind. So, folks, look after your foliage. Nurture it as soon as it comes through the ground; indeed before, by providing the appropriate nutrients in the soil prior to planting. As soon as the foliage is through, a spray pattern of approximately once per fortnight should commence. My second floral love happens to be roses, so what they get the daffodils usually receive. My sprays are an alternate of a cocktail of Benlate (benomyl), Zineb (diathane Z278), and Shield (Saprol and Orthene) followed by Bravo (chlorothalonil) and Maldison, It is very important to vary your fungicides as tolerance can build up in the plant, a point which was brought home to me very forcibly in convention year! Once your foliage is two to three inches up, a careful visual inspection should take place. Look for yellow stripes in the foliage, or mottling, or serious distortions. Dig any affected cultivars and varieties and burn, as they have contracted Daffodil Public Enemy Number One: Virus, Identifying virus can be difficult for the beginner; this is one occasion where you should consult your local guru before acting too quickly. If you haven't got a guru handy, all I can do is recommend a reading of Theo Snazelle's wonderfully depressing articles on the subject. At this early stage of growth you should also watch out for any premature browning off of foliage. If severe, the only solution is the incinerater. If caught early, the remedial spraying recommended above will control any further spread. You should also be on the lookout for brown tips on the foliage. Now up until this year I used to ignore such symptoms, putting them down to a combination of mechanical damage sustained in weeding and/or frost damage. However one of our house guests during Springworld was Brian Duncan of Rathowen Daffodils. Brian claimed that brown tips were signs of a fungus complaint called staganospora. I rather tended to scoff at such notions, but when Brian wasn't looking I picked a couple of leaves for analysis. Sure enough, fungus spores were located; so I have now purchased a jacket with large pockets and will follow Brian's example of picking off such tips, and will of course delight in burning them!

If the above points are heeded, with any luck you will have some lovely green foliage after flowering. This is where most beginners show their lack of experience. Once the flowers are spent they ignore the foliage, at a time when it needs their attention most. Keep the foliage in good shape as long as you can—do not commit the cardinal sin of cutting it off, or even tying it up in tidy knots. Keep the spray pattern going; and if there is a dry spell, moisten the ground, preferably with soaker hoses. About one month after flowering you may desist and allow the foliage to die back naturally, and to let the weeds form the famous Pannill green mulch.

So much for foliage, what about water? Too much and too little are both disastrous. We should remember that some dalfodil forms are semi-aquatic during their growing period, but that they also need to dry completely out in the summer. There is a belief around here that during the growing period the bulbs need one inch of water per week. We also believe that our best seasons follow a wet winter. Lesley, my much suffering dalfodil partner, has what she calls the terrace-mud test. The more mud on our terrace from my (and let it be noted her) boots the better the flowers! In the last two winters very dry conditions prevailed; consequently the flowers were smaller than usual, and had less substance. I guess further proof of the power of water comes from the fact that the best flowers I've seen come from places with naturally damp climates—Tasmania, Oregon, Ireland, and England. And, oh yes, some parts of New Zealand—which parts I've yet to figure out—perhaps I should persuade our Government to let me lease a part of Fiordland National Park which has 150 inches of rain per annum.

The message here is I hope relatively clear. After planting make sure your daffodil beds are kept nicely damp. And keep damp until one month after flowering. Then let them dry off completely, either inground or in storage. The best water is of course Nature's Own; but if you live in places like California and grow in ditches instead of the mounds utilized in most other places, then you will need to

help Nature along.

Good luck with your daffodils. They are not the hardy plants that average garden books make them out to be. They are challenging plants. But they really are the most rewarding of all.

Further Reading:

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WOE! WOE! WOE!

HAROLD CROSS, Geilston Bay, Tasmania

(from the Tasmanian Daffodil Council Newsletter, July, 1984)

Long, long ago when I was a small boy there were still plenty of horses around. I remember being greatly puzzled one day by a street-corner preacher who uttered the above cry when there wasn't a horse in sight. It was many a year before enlightenment came, but the cry of that preacher summarizes quite succinctly most of my efforts to photograph daffodils in the past twenty-five years.

Now let it be admitted that my efforts were understandably handicapped by a distinct lack of knowledge about photography. Oh, yes, I'd taken slides of the children, scenic views and similar subjects, but flowers had been outside my photographic experience. Still, slides of daffodils were what I wanted, and so the

battle began.

The camera with which I began was not a reflex camera, and I remembered enough of my study of physics to recall the problems of parallax error. So I duly made allowances—or, to be more accurate, I thought I did. But when the people who processed my film recovered from their hysterics long enough to send my slides back to me, I found that daffodils obviously objected most strongly to being photographed. Those supposedly gentle, inanimate objects had jumped all over the place—and I've been struggling ever since to get the better of their love of gymnastics.

After consultation with the proprietor of a camera shop, I invested in a single lens reflex camera with which I was assured my problems were at an end. I suppose the salesman was quite right, but the cunning rogue carefully refrained from pointing out to me that one end is otherwise known as "the beginning." I should have realized this when the salesman called me back as I was leaving to explain that he had just remembered that I would also need an extra lens for really close-up work. How fortunate! He just happened to have the very thing I needed which was available at a very reasonable price for so valued a customer.

So, when next the daffodils came out I was ready—or so I innocently thought. But getting the right exposure posed a problem or two because indoor photos appeared to require a large aperture opening and a longish exposure time. Surely, I thought, my steady hands would not waver even slightly during one-thirtieth part of a second. Alas, but they did and so another season's photographs had to be

consigned to the rubbish bin.

A friend, more learned in photography than I, pointed out that very fast film would enable a smaller lens aperture and so a greater depth of field. Alternatively I could opt for a faster shutter speed and so avoid the effect of trembling hands. Aha. So now I had the answer at last! What a pity he didn't also tell me that the end product would have a decidedly "grainy" appearance that seems to accompany very fast film.

Then it occurred to me that the solution to my problem was really quite simple—photograph them outside. Now I'd have it all wrapped up. When the next season came I took my photos outside and eagerly awaited the superb slides that would undoubtedly be mine. To be sure I had noted with some alarm that there seemed to be problems with the physical condition of the flowers which in still air conditions seemed to be afflicted with violent shakes. But patience appeared to be rewarded when they apparently stopped still long enough for a smart operator to take the shots in between their shivering.

In due course my slides came back and they were quite good except for two problems. Those flowers that had been quite still when the shot was taken had a wonderful array of backgrounds. I had assumed that a close-up in focus would ensure a background so far out of focus that the background wouldn't matter. Those slides in which the background was not conspicuous showed flowers moving like an express train across the slide.

Much thought showed that evidently I needed to take my photographs in some place not subject to wind movement yet in open sunlight and with an appropriate background. Eventually I found my answer which was to set up camera, background, and flower in my small glasshouse. This time surely everything would be right—the light was good, the background was in place, and the flowers were still. In due course, back came the slides and all of the them showed slight but distant bars of shadow which I eventually found to be caused by the bars of metal in the roof of the glasshouse.

Now daffodil growers are nothing if not persistent, and there was yet another alternative involving the use of an electronic flash gun. Did you know that some cameras have a shoe? I didn't, and my camera hadn't one, but it is the little fitting that holds a flash gun. Because my camera lacked one, I had to use a more cumbersome attachment. But when flowering time came there was I, ready and waiting. Could anything else possibly be wrong? Oh, yes, it could, as I discovered when my slides came back with strong shadows thrown by the cups onto the petals by the flash.

In due course, fate decided to take pity on me, though in a whimsically wayward fashion. It came about through my daughter number three falling in love. Eventually, as the novelists put it, a marriage was arranged and the young couple decided that the groom's brother would take the all-important wedding photos. This he duly did and I found that the camera he used cost so much that had it been mine it would have been locked away in a bank vault as security against a penurious old age. But he knew what he was about and agreed to help me photograph my daffodils.

Two tungsten lamps each of one thousand candlepower plus stands and reflectors were the main items; and when all was set up, he suggested a trial run. Wise fellow! I assumed that the camera's light meter would automatically be correct but we found it was four stops out of true. A trial film showed that if the four stops were allowed for the slides would be good. The film used looked very impressive for it was prominently branded "Professional Film."

Eureka! When the slides came back they were as good as I had hoped for. So, anxious to be able to show all and sundry at last what a remarkably clever fellow I am, I decided to order lots of prints from the commercial firm that had processed the film.

Alas, pride goeth before a fall, and I found out that mass production methods have serious limitations. My prints were a mess with colors that bore practically no resemblance to the slides, with some flowers partly decapitated, with others partly de·xxx (for xxx read whatever the word is that chops off feet and sides) and so on. More than a little upset, I took the worst dozen or so back to the shop to complain. It was agreed that the prints were not satisfactory and back they went to be done again. In fact they went back three times more before I gave up and accepted the poor things that were the best they had produced.

Then I went back to see my daughter's brother-in-law once more. He sent me to a small firm he knew of where they did their own work and took pride in it, too. It cost me a little more, but what they turn out has to satisfy their own inspection before it is handed over; and has to be done again at their expense if it does not pass that scrutiny. Here at last were photos which satisifed.

Next season? Well, sufficient unto the day...or have I at last reached the stage when to my photographic problems I can cry WHOA! WHOA!

PHOTOGRAPHING DAFFODILS

WELLS KNIERIM, Cleveland, Ohio

The inclusion of color in our *Journal* has been well received and should be continued. And with many new cultivars being introduced, our photography committee will always need new slides to keep our film library up to date.

Daffodil photography is easy, but does require some good equipment and a lot of practice by the photographer. Since most newer cultivars appear at shows, most shots are normally taken by flash. The following equipment for taking such pictures is:

1. Any good 35mm, single lens reflex camera with a macro (close up lens). Less expensive would be the addition of close up attachments to a normal 50mm lens

2. A low power electronic flash (guide 30 with ASA 25 film).

3. A bracket or extension arm which attaches the flash to the camera at five or six inches to one side and slightly above the lens of the camera.

4. A cardboard backdrop (dark green, blue, or black) to place behind the

subject to isolate the bloom from nearby distracting flowers.

Close up shots in which the daffodil bloom fills the entire frame gives the best detail of the flower. Select specimens with fresh pollen, if possible, and showing the characteristics of the bloom you wish to show. To get the best depth of field focus, it is necessary to use a small aperture (f22 with ASA 64 film for a single bloom at twelve to sixteen inches from the film plane) or f16 for a group of three blooms at about thirty inches. Set the shutter speed at the mark indicated for flash. The speed of the flash indicates the amount of light on the subject.

That's it. But the important suggestion is to experiment with your own equipment. Take several rolls of film and take several shots of the same flower (perhaps use artificial daffodils to get ready for the season), keep good records of the different f stops, etc. that you used, and then make a guide to use on the flowers at the shows.

After the judging, I hope you can find a convenient spot to take the specimen blooms for your work. I normally use a small card with the name and color code in a pin holder under the bloom at the same plane so that the identification is on the slide. It requires more work and time to make accurate individual records of the flowers.

This is the way I do it. Now, there are many new automatic cameras that claim to make photography easy. But no camera is automatic without specific knowledge of how to use it. My only suggestion is to experiment with it for some time before you go to the shows. Know how to use it before you want to take good daffodil slides. You will save money and, more importantly, disappointment.

PHOTOGRAPHING DAFFODILS

MARY LOU GRIPSHOVER, Sunnyvale, California

Several articles appear in this issue of the *Journal* with regard to photographing daffodils, in the hope that you will be able to record some of the memories of the season on film and perhaps later share them with readers of the *Journal*.

Photographing daffodils is neither as difficult as Mr. Cross's article suggests, nor as easy as the makers of automatic cameras would have you believe. As both Mr. Cross and Mr. Knierim suggest, however, it does make sense to practice with

your equipment before you get to the all-important best-of-show-bloom!

A single lens reflex camera is an ideal choice because what you see through the view-finder is what you'll get on film. Several options are available for taking close-up shots, the least expensive being the screw on lenses called diopters. These usually come in a set of three, marked #1, #2, and #3 (clever, right?), and can be used either separately or together to allow you to move in closer. Other options include a macro lens; and for extreme close-ups of parts of the flower, reversing rings can be used.

Film selection depends on how you plan to use it (with or without flash indoors or out) and, to some extent, your personal preference. Generally, Kodachrome gives better rendition of yellows and reds, while Ektachrome gives better rendition of the blues and greens. If you plan to use a flash and fill the frame with the bloom, then select ASA 25. Set the shutter speed indicated for flash on your camera and set the aperture at f16, or f22 if that is available on your lens. The f16, or f22 will give you maximum depth of field sharpness. If your pictures are consistently too light, or washed-out, probably your flash is too powerful. Try putting a kleenex over the flash (use a rubber band to keep it on) and see if that helps. If your camera has a setting for deliberate over and under exposure, try setting it at -1 or -1-1/2 to see if that helps. (Here's where all the practice is important. Keep records of what you did for each shot, then use the same parameters that gave your best results when you go to take your important photos.) Remember that slides will always have deeper color if they are slightly underexposed. If print film is slightly overexposed, it can be corrected in printing. If shooting outdoors, try ASA 64, for a bit more speed. Try using the flash on close ups outdoors; again, use the same setting you've found works well indoors. The flash will stop a moving flower, and the small aperture will eliminate much of the distracting background. As Mr. Cross pointed out, flash pictures may have distracting shadows. I would caution you against using the fast films in available light indoors. They will give you grainy pictures, but perhaps most annoying will be the color rendition. These films are balanced for daylight, and indoor light will give a pronounced yellow-orange cast. Besides, you will have to use a bigger aperture and lose depth of field. resulting in a picture that is sharp at the point of focus, but fuzzy around the edges. If you're using print film, tell your processor what kind of light it was; a good processor can correct the color in printing. Nothing can be done with slides short of having them copied and asking that the color be corrected. Sometimes this may work. If you set up a studio shot with photo floodlights, either use ASA 160 tungsten film (color balanced for indoor light) for slides, or use the appropriate filter on your camera lens. Be sure to use a tripod.

Shooting black and white film is no different than shooting in color. People tell me they can't take good black and white pictures. That just isn't so. If you take beautiful slides, you can take just as good black and white pictures. What you need is a good printer. (Send me your negatives and I'll prove it to you.) Use the same technique you've found works with ASA 25 film, and use it on black and white ASA 32 film. The only difference to remember is that if you're deliberately under exposing by half a stop to get deeper color in your slides, go back to a normal exposure (from -½ to 0).

Flash attachments come in various sizes. If all you're ever going to shoot with flash is close ups of flowers, buy a low power flash. Otherwise buy a flash that meets your requirements and learn to use it for close ups. Don't expect an automatic camera equipped with an automatic flash to give you a good close up. Most automatic flash attachments won't give you the correct amount of flash when you are closer to your subject than eighteen inches. Set them both on manual, and experiment to see what gives you the best pictures. This really is a place where practice makes perfect.

SOME SOUTH CAROLINA DAFFODILS

CHERYL POSTLEWAIT, Cheraw, South Carolina

Some of you long-time members of the American Daffodil Society may remember Tom Jones of Chesterfield, South Carolina, who was one of the charter members of the organization. Tom, who is now getting close to 80, has been planting daffodils every year for 40 years. There surely can't be a finer array of daffodils in all of Holland.

The back of Tom's place slopes down to a creek and daffodils tumble all the way down the hillside. When he planted his first daffodils, he mulched them with pine straw. Some pine seedlings emerged from the mulch and now huge pine trees shade the sparkling daffodils that still bloom beautifully every spring. There is also a large, perfectly formed Japanese Cherry tree that bursts forth in delicate light pink flowers during daffodil season. The Jones's original home, long unoccupied, still stands on the lot and gives a dramatic dark weathered contrast to the lovely yellow, white, and orange twinkles of the daffodils.

I love to visit the Jones's garden many times each daffodil season and always try to bring a guest with me. It is as much fun to see the first-time visitor's reaction as it is to see the flowers. Tom has always planted bulbs from the twelve categories and the variety of specimens is beyond belief. Every visitor receives a liberal dose of southern hospitality when Tom picks an armful of daffodils for them to take home. It reminds me of when Jesus fed the multitudes with three fishes and two loaves of bread. In Tom's garden, no mater how many are picked, there are always plenty for everyone to view.

Being new to the South, I've been overwhelmed at the generosity of the gardeners. Tom is always giving me starts of flowers, vegetables to eat, and gardening material to read. Tom still raises a huge vegetable garden every year, has many perennials, and an extensive giant chrysanthemum collection. Even though I'm less than half his age, I know I'll never keep up with him.

"Blessed are all bulbs and seeds,
For they are the promise of a spring to come,
For they are symbols of a world to be,
A promise of immortality,
Of life out of death and hope within despair,
Of whiter dawns on other days,
Of harvests, beautiful and brown,
Of plenty and of prophecy."
William L. Stidger

DAFFODILS AT DINNER — BUT DON'T EAT THE DAFFODILS!

MEG YERGER, Princess Anne, Maryland

What arrangement could be more appropriate for a party table than a decorative unit of the very foods included in the menu? And better still daffodils should be included in the design! The easiest daffodils to use in an arrangement are those which are uncomplicated in form such as flat-nosed blooms from Divisions 3 and 9, and tazettas. Most of these, too, give a bonus from their fragrance.

To use with the daffodils, choose ferns suggestive of the fiddleheads included in the salad with smoth green Anjou pears or Granny Smith apples and seedless green grapes as texture contrast with the fern. Collard greens or Kale can be background foliage for the fruit and carry the eye up into and around the design.

The daffodils are accents in the otherwise green design.

If okra soup is to be served, the ingredients can be included in the table arrangement. Okra soup is made chiefly of young okra, onions, cimlins, and tomatoes. In these days of food importation from Chile, New Zealand, and Tasmania these foods can be had in fancy food markets year round. Planning ahead can give special distinction by using okra for the line material. If okra is lashed to a strong wire frame when young, it can be bent into s-curves as it grows that will win kudos for imaginative design after it dries. Such winter vegetables as chard (Swiss, ruby, or rhubarb) are bold enough to be compatible with striking okra stems. Dried blooms of the onion family such as leeks or elephant garlic provide size and texture contrast with poeticus or short-cupped daffodils. If New Zealand spinach with yellow veins is used, then all-yellow tazettas would be a lovely choice for the daffodils.

The number of other plants from the food garden that can be used with finesse is endless. The designer's choice is without limit, particularly if she plans ahead. Almost any plant that is tall and grasslike can be trained into whorls and circles either on the living plant or when fresh-cut. Try wrapping fresh-cut still-green grains, like wheat, in wet paper towels which are curved around a large can and allowed to dry. The resulting circles and spirals can be fabulously useful as basic structural material.

Much distinction comes from color. Take the swatches from the Royal Horticultural Society Color Chart with you to the supermarket or the garden, first having matched them up perhaps with the colors in the corona of a poeticus or other daffodil. Achieving just the right match is fun.

Learn to look at forms of foods. Perhaps kohlrabi may appeal to you, especially if you try it upside down. Think of pearl onions for pizzazz if the daffodils you are

using are white.

The possibilities for table designs from daffodils and food are limitless—all you have to do is try it!

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AN EDUCATIONAL EXHIBIT

JAYDEE ATKINS AGER, Hawkinsville, Georgia

I recently married and moved to a new area and decided to put on a miniature daffodil show and make it educational. The small town where I work was a perfect location. I enquired at one of the local banks and was told I was welcome to make use of the lobby for my exhibit. The local newspaper was glad to help with publicity and the local radio station announced the show frequently. A call to a local garden store/nursery brought some beautiful fern baskets to "fill in" the corners of my exhibit. A friend in the Georgia Daffodil Society had graciously loaned me her counted cross-stitch explanation of the RHS System of Classification. Yes, I said counted cross-stitch. Mrs. Fleming Boyd had worked all winter long to complete the educational exhibit. She used the board in her educational exhibit at the 1984 Southeastern Regional Show in Atlanta. In my display, I used Mrs. Boyd's tri-fold board as a background. In front of this I displayed catalogs and brochures for browsing. I gave hand-out sheets filled with general daffodil information. I showed an example of one stem each of all the different classifications, with the exception of Division 12, along with several collections. I also tried to concentrate on the daffodils that always seem to intrigue the general public. Among these are pink cups, split coronas, doubles, and as always, the delightful miniatures. Altogether, 192 blooms were exhibited for two days at the bank in the main lobby. I estimated that over 250 persons saw the show.

The show was a real success! Although it took a lot of hard work on my part, I received some great support. Why not put on a show in your area? It is rewarding and hopefully you will "zap" someone and a new daffodil enthusiast will be born.





BULLETIN BOARD

FROM THE PRESIDENT'S DESK

Nineteen-eighty-four was a good year for the American Daffodil Society. We are in sound financial condition, and interest in the Society remains high. We have hardworking, dedicated Committee Chairpersons who are performing their duties well.

Our Journal is an excellent advertisement for the Society and has won several awards from the National Council of State Garden Clubs, Inc. Our Editor, Mrs. Paul Gripshover, deserves praise and thanks for continuing the Editorship in spite of a move from Tennessee to Sunnyvale, California. We appreciate very much her will to carry on in spite of the move for her family and many of her bulbs. We are also very proud of the amount of color we now have in the Journal.

In September, forty of our United States members and spouses attended the Nylex Springworld '84 Show and Third World Daffodil Convention in Hamilton, New Zealand. We were wined, dined, and treated as royalty, all of which made for a delightful experience. Daffodils were in abundance, and the staging of daffodils in the Springworld show was awe-inspiring. We were saddened not to see our good friend, Phil Phillips, but his wife and son cordially greeted and entertained us.

We are anticipating our thirtieth Annual Convention the last week in April at King of Prussia, Pennsylvania. The Mackinneys and their committees are working hard to show us a good time. Let's all attend!

Dr. Throckmorton, the Ticknors, and their committees have edited and published a revised edition of *Daffodils To Show and Grow* which is now available from the office of the Executive Director; our thanks to all who worked on the new edition.

Due to the New Zealand trip there was no fall Board of Directors' meeting. I wish to thank all who carried out their duties for 1984. Their reports will be given at the 1985 Board of Directors' Meeting preceding the convention.

May 1985 bring beautiful daffodils to all of you, and for the hybridizers new and exciting seedlings.

HELEN K. LINK

JUDGING SCHOOLS

School III	March 16, 1985; Hernando, Mississippi; Chairman: Leslie
	Anderson
School II	March 10, 1985; Sherman Foundation Gardens; Corona
	Del Mar, California; Chairman: Marilynn Howe.
School II	**April 11, 1985; Charlottesville, Virginia; Chairman:
	Donald King.
School II	April 14, 1985; Dayton, Ohio; Chairman: Mrs. Fred
	Schuster.
School II	May 1, 1985; Greenwich, Connecticut; Chairman: Mrs.
	Thomas Haffenreffer, Jr.; 46 Suffolk Road; Chestnut Hill.
	Massachusetts 02167.

CORRECTIONS TO JUDGES LISTING IN THE ROSTER

The roster which was published in December inadvertently lists some student judges as accredited judges, and lists some judges not at all. Please correct your roster to reflect the status of these judges as shown below. We apologize to those involved, and regret any inconvenience this may have caused.

AJ Mrs. B. B. Boozman, 906 North 15th St., Fort Smith, AR 72901

SJ Dr. Narito Hosegawa, 3319 W. Lincoln, Ste. 103, Anaheim, CA 92801

SJ Ms. Susan Marie Ridgeway, 329 Meadow Lane, Monrovia, CA 91016

AJ Mrs. Clark T. Randt, 59 Husted Lane, Greenwich, CT 06830

SJ Gene Wiley, 3333 Sky Croft Circle, Minneapolis, MN 55418

SJ Mrs. Ozell D. Scott, 3476 Johnston Rd., Hernando, MS 38632

SJ Dr. Elise Olsen Chesseborough, 109 Carolina Forest, Chapel Hill, NC 27514

SJ Donna C. Dietsch, 5192 Bagley Road, Columbus, OH 43227

SJ Mrs. Albert Sadler, 667 Stubbs Mill Road, Lebanon, OH 45036

SJ Mrs. Robert N. Sulgrove II, 5512 Woodbridge Lane, Dayton, OH 45429

AJ Richard T. Ezell, 94 Willowbrook Dr., Chambersburg, PA 17201

SJ Mrs. R. F. Gillespie, Box 95, Woodberry Forest, VA 22989

SJ Mrs. Phillip S. Griffin, 205 Fairmont Ave., Winchester, VA 22601

SJ Brent C. Heath, Rt. 3, Box 208-R, Gloucester, VA 23061

SJ Nelson Houser, 1112 Wynbrook Lane, Mechanicsville, VA 23111

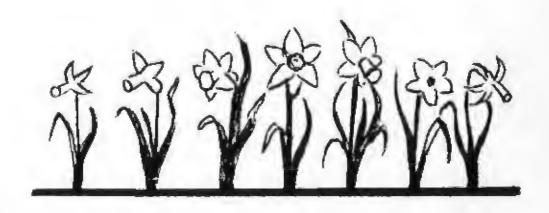
SJ Mrs. Ann D. Spivey, 7 Dahlgren Rd., Richmond, VA 23233

SJ Mrs. Percy Wootton, 17 Tapoan, Richmond, VA 23226

CORRECTIONS

The listings in the December Journal of American registrations for 1984 gave incorrect spellings of several cultivars registered by Mrs. Merton Yerger. Both Greenspring (named for the Greenspring Valley section of Baltimore) and Greenpool should be spelled as one word—not two as listed.

The sharp-eyed among you will have noticed that the photos of Woodvale and Newcastle (in the article about Willie Dunlop, December, 1984) are reversed. The Editor regrets the errors.



AN AUSSIE BOOK ON DAFFODILS

The Herald of Spring—Daffodils, published in 1983, is a 47-page paperback

covering all aspects of growing daffodils in Australia.

Author Robert J. McIlraith covers his subject most effectively in twelve short chapters beginning with the component parts of the plant, then discusses their distribution and species before considering their cultivation. Other chapters cover classification, bulb production, and pests. It includes many photographs, some in color, and line drawings.

A copy of this slim volume is now in the ADS library. If enough members are interested in purchasing a copy, the Executive Director may consider ordering

several copies.

CALL OF THE ANNUAL MEETING

The annual meeting of the American Daffodil Society, Incorporated, will be held on Thursday, April 25, 1985, at the Holiday Inn of Valley Forge in King of Prussia, Pennsylvania, for the following purposes:

1) for the election of officers and directors as provided by the By-Laws

2) to take action and transact any other business which may properly and lawfully come before the meeting.

By order of the Board of Directors MARILYNN J. HOWE, Secretary

COMING EVENTS

March 23-31, 1985 April 11-12, 1985 April 25-27, 1985 April 30-May 1, 1985 Daffodil Festival, Tacoma, Washington RHS Daffodil Show, London England ADS Convention, King of Prussia, Pennsylvania RHS Late Competition, London, England

HERE AND THERE

Anne Corson reports that Nylon, grown outdoors for the past two years, bloomed on December 21, 1984, and remained in bloom until January 4 or 5.

"I only protected it with a hot cap two nights in early December," she says. Mrs. Corson lives on the Eastern Shore of Virginia at about the northern limit for camellias, with occasional 0°F temperatures.

Word has reached us of the death in October of Dorothy P. Tuthill of Rye, New York, at age 93. Miss Tuthill was a charter member of the ADS, and was the organizing chairman and president of the Westchester Daffodil Society (since dissolved after nearly twenty years of activity). Our sympathy to her family.

A VISIT TO CORNWALL TAMAR VALLEY DAFFODILS (du PLESSIS BROS.)

JAN DALTON, England

(from the Journal of The Daffodil Society [Britain], February, 1983)

On March 27 and 28, 1982, seven daffodil enthusiasts from Yorkshire spent a most enjoyable week-end in Cornwell as the guests of Dan and Eileen du Plessis on their farm at Landulph, near Saltash.

The purpose of the trip was to view the daffodils in growth and flower at Marsh Farm, and to visit Rosewarne E.H.S. at Camborne on their open day. My notes will be restricted to the daffodils and their culture at Marsh Farm and our visit to

Rosewaren is covered in the report by Ivor Fox which follows.

To begin, Dan du Plessis, along with his brother Peter and their wives, cultivates daffodils on a commercial scale both for the cut flower trade and also for bulb production. Some sixteen acres are down to bulbs of the well-known and also bulb production. Some sixteen acres are down to bulbs of the well-known and well-tried commercial cultivars such as Golden Harvest, Carlton, Mount Hood, Ice Follies, White Lion, etc, whilst a further two acres are down to exhibition cultivars and seedling stocks. Apart from the wholesale trade, many bulbs are offered for sale in a retail catalogue containing almost 500 named cultivars.

The soil at Marsh Farm is, in the main, a heavy clay type which is not the most suitable for ideal cultivation methods. However, the flowers and foliage show no ill

effects from this and bulbs, when lifted, are quite solid specimens.

Prior to planting, all bulbs are given hot water treatment by first pre-heating the bulbs for a week at 85°F, followed by soaking for three hours at a temperature of 114°F in an aldrin solution; thereafter the bulbs are allowed to cool. Planting is carried out using a home made "potato-type planter" and bulbs are then left down for two years.

After harvesting, which is achieved by using a single row elevator lifter, bulbs are not grown on that land for a minimum of five years and where possible, seven years. From these operations it is safe to assume that a healthy crop is maintained,

and such is the case.

Flower picking begins as early as 7th January and stretches right through to the beginning of June, a fact that tends to pour cold water on our theories that the daffodil flowering season is a short one.

Dan has grown bulbs commercially since 1943, and in 1957 he ventured into exhibiting at the West Country Shows. His interest in the shows and exhibiting has seen the building up of stocks in exhibition bulbs and eventually gave rise to the retail side of the business. Several stocks of seedlings have been purchased under number from various sources over the years and subsequently named. Some of these I would like to mention in more detail, others, which were not in flower during our visit, will no doubt be observed in the future.

Chenoweth 2 W-WWP is a very good non-predominant pink cup of excellent form and constitution, perhaps lacking a little in the pink coloring, which tends to fade as the flower ages in much the same way as Drumboe. None the less, a very good collection flower which I believe came from the Rathowen stable.

Bere Ferrers 4 W-O is a very nice double with a subtle difference of coloring to most of the Div. 4s available at the moment. Not a huge flower, but very good in form and petal placement. Raised by Mrs. Richardson.

Tamar Fire 4 Y-R is another neat double, of good color though a little on the

small side for exhibition.

Meavy 1 W-W registered in 1981, is a sister seedling to White Star. It is much narrower in the petal than its now famous partner and more pointed, not unlike Cantatrice.

Gay Kybo 4 W-O is another very good double of perfect form, raised by Mrs. Richardson. The petals are more cream than white, though this does not detract from the flower. Featured in two first placed exhibits for doubles at the Daffodil Society's show in 1982.

Penyoke and Tinnell 1 W-Y are two bi-color trumpets of note. Both have good contrast and are strong growers, and should be of benefit for the Arkwright Cup class at Birmingham.

These, then, are but a few of many seedlings that have been named and put on the market. My comments have been restricted to the show bench potential of the flowers; however, it must be remembered that some seedlings are also selected and named for their commercial viability in producing bulbs and cut flowers, a slightly different purpose to that of exhibitors' requirements.

Dan's aims for the future are to build up commercial stocks of some of the more modern cultivars and introduce them to the public. New methods of bulb propagation will assist in this venture, and at Marsh Farm "twin-scaling" is in operation to achieve a quicker build up of stocks. To further this cause, Dan, along with a number of commercial bulb growers, has now formed a consortium with a with a number of commercial bulb growers, has now formed a consortium entitled the Cornwall Area Bulb Growers Association (CABGA). Part of the Association's plans will be to purchase, jointly, new cultivars and seedlings form Rosewarne E.H.S. and other sources, to complement existing cultivars.

One such purchase is that of the cultivar Tamara 2 Y-Y, bred at Rosewarne in 1964 and registered with the R.H.S. in 1980. The total stock of this cultivar (approx. 1,500 bulbs) was bought by CABGA in 1981 and is being extensively increased by twin-scaling and micropropagation until a considerable acreage is available.

Finally, in concluding these notes it is only right that I should thank Dan and Eileen for a memorable excursion to a hitherto unvisted Cornwall. Thanks to Dan, for giving up a week-end of his valuable time, and to Eileen, for the marvellous food served on our arrival and departure. More genial hosts one could not have wished for; and as the short, dark piercing days of winter get ever nearer, we will all recollect the "warmth" of friendship and, of course, the daffodils.



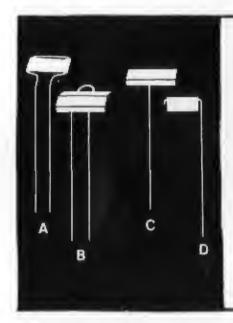
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DAFFODIL FIRE IN WESTERN WASHINGTON

GARY A. CHASTAGNER

Washington State University Western Washington Research and Extension Center • Puyallup, Washington

Diseases are an important factor in the commercial production of daffodils and can be a problem for the hobbyist. Basal rot is a major problem with some cultivars and can cause tremendous losses. Fire, white mold, smoulder, and scorch are four important foliar diseases of daffodils that are caused by fungi. Although not as evident as with diseases like basal rot, these diseases reduce bulb yields and flower production because of the premature death of the infected foliage.

Fire was originally found on daffodils in the British Isles and historically, has been considered to be uncommon in the Pacific Northwest. However, observations in 1978 indicated that fire was prevalent throughout the daffodil production areas in western Washington. Between 1978 and 1981, I studied the development of this disease in western Washington in an effort to develop an effective control program.

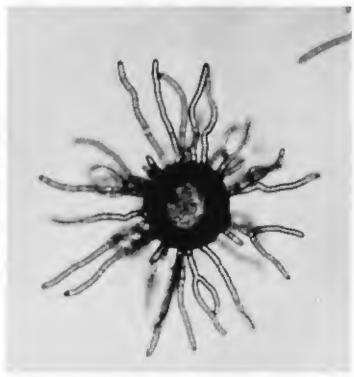
Fire is caused by Botryotinia (Sclerotinia) polyblastis, and primarily occurs after flowering. The fungus which causes this disease has two distinct stages based on the type of spores produced. The name Botryotinia polyblastis refers to the sexual stage of the fungus which produces spores known as ascospores. The name Botrytis polyblastis refers to the asexual stage of this fungus which produces spores known as conidia. Each of these forms plays a different role in the development of this disease.

The fungus survives as small, black structures called sclerotia that are produced in diseased foliage and flower stems. Overwintered sclerotia produce the sexual stage of *Botryotinia polyblastis* which is called a spore cup or apothecia during the spring (Figure 1). The spore cups produce sexual spores which are called ascospores. In 1938, studies by Gregory showed that these ascospores were only able to infect flowers. Initial symptoms on infected flowers consist of water-soaked areas which turn brown and wither.

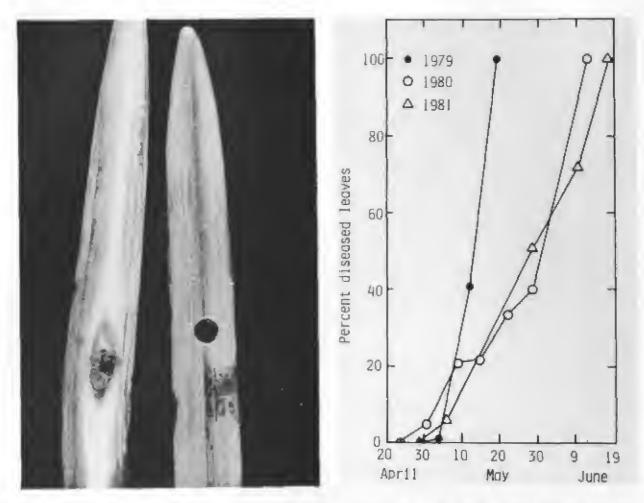
We monitored the production of these spore cups during 1980 and 1981 and found that initial production occurred in early April and mid-March, respectively. The number of spore cups reached a peak after two weeks, then gradually declined the next three to four weeks during both years. During years in which spore cups were not produced no disease developed on daffodils in our test plots.

After infection by ascospores the asexual stage of *Botrytis polyblastis* produces conidia on these infected flowers. Conidia of *Botrytis polyblastis* are very unusual in that they are very large in relation to other species of *Botrytis* and many germ tubes rapidly emerge from these single-celled conidia upon germination (Figure 2). (This characteristic is the reason Dowson named this fungus poly (many) blastis (rapid) in 1928.) Conidia produced on infected flowers





Left, Figure 1: Spore cups or apothecia of *Botryotinia polyblastis* produced on overwintered sclerotia. These structures are approximately one-eighth of an inch in diameter. Right, Figure 2: Germinated conidium of *Botrytis polyblastis* with multiple germ-tubes. This conidium is approximately 0.001 of an inch in diameter.



Left, Figure 3: Symptoms of fire on daffodil foliage (left). Note yellow streaks associated with lesion and (right) the lack of yellowing associated with removal of a leaf disk with a cork borer. Right, Figure 4: Development of fire on Bloemfontein daffodils.

are responsible for the spread of this disease to adjacent flowers and initiation of the infections on leaves. Initial leaf symptoms are small, elliptical tan-colored spots generally near the tips of the leaves. Bright yellow streaking toward the tip and base of the leaf occurs shortly after infection (Figure 3). Additional conidia are produced on infected leaves and result in the rapid spread of this disease. During my studies, initial leaf infections were observed in late April (Figure 4). Left unchecked this disease completely destroyed plantings within two to four weeks.

This disease is favored by warm, moist conditions and is much more likely to occur when daffodils are not dug every year. Studies have shown that the premature death of foliage caused by fire reduces bulb yields by as much as 50% and significantly reduces flower production. Yield tests on 46 cultivars in western Washington showed that control of this disease resulted in an average yield increase of 20%. Symptoms of this disease can easily be confused with natural senescence or dieback of the leaves and with the scorch disease caused by Stagonospora curtisii.

Cultural methods which are effective in providing some control of fire include yearly digging and crop rotation. The occurrence of fire in the British Isles has been reduced since the practice of cutting all unopened flowers has been adopted to break the disease cycle. This is not done in western Washington nor does it seem

appropriate for the daffodil hobbyist.

Fungicidal control studies in western Washington have shown that two applications of Benlate fungicide at 1 lb/100 gallons of spray provides effective control of fire (Figure 5). The first application should be made in late April followed by the second in two to three weeks. Applications of Ronilan at 1 lb/100 gallons were also found to be effective. Applications of Dithane M-45 (mancozeb) have not provided effective control in our tests, but are recommended for control of this disease in Europe.

180



Figure 5: Effectiveness of two applications of Benlate (row marked 283) in preventing the premature death of foliage associated with fire (unmarked row to left).

Control of fire and other diseases on daffodils depends upon the accurate identification of each disease. There are several excellent publications available which will assist in the accurate identification of daffodil diseases. One such publication can be obtained by requesting Washington State University Extension Bulletin 709 entitled "Diseases of Narcissus" from the Bulletin Department, Cooperative Extension, Cooper Publications Building, Washington State University, Pullman, WA 99164. The cost of this bulletin is \$2.00.

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RIHILL REVIVAL—A POET CULTIVAR RETURNS!

MEG YERGER, Princess Anne, Maryland

Rathowen's 1984 price list includes a special stock disposal offer including a poeticus cultivar registered in 1957 as Joyce Rihll 9 The spelling was later corrected in the 1969 Classified List to Rihill. To find this daffodil listed for sale was like tinding a long lost triend, because in 1974 I had written in my "to look for" list the name of Joyce Rihill together with the names of exhibitors, R.H. Southon and A.H. Noakes, who had won prizes with it in the April 14-15, 1970, R.H.S. Daffodil Show. I thought sometime it might be possible to inquire from them as to where it might be bought.

Stanley Dudman, who raised and registered Joyce Rihill, lived at 29 Brookland Ride, London, N.W. 11, and served on the RHS Narcissus and Tulip Committee from 1949-1968. In the records of the RHS Daffodil Competition for 1947, he was listed as being the biggest total prizewinner in the amateur classes having won ten

prizes, including seconds and thirds.

The following year he won prizes across the board with incomparabilis; Barri; Leedsi; jonquil hybrids, including the miniature Sun Disc; tazettas; poeticus; doubles; cyclamineus hybrids, including P.D. Williams's Pepys; N. × tenuoir. These were for an assortment of singles, vases of three, and collections. In a class for one variety raised by the exhibitor he, as the only entrant, won a second prize for his own seedling. (Could this have been Joyce Rihill?) At that show Mr. Dudman seems to have established himself as an exhibitor worthy of note, and the next year was included in the list of members of The RHS Narcissus and Tulip Committee. He continued to exhibit as an amateur only.

In the year of 1957 when Joyce Rihill was registered, the name of Tom Bloomer of Rathowen also appeared in the lists of winners in Amateurs only classes. Surely he and Mr. Dudman must have met. Can this be how the cultivar Joyce Rihill came

to be included in the Rathowen stock?

An article written by Stanley Dudman for *The Daffodil and Tulip Yearbook* of 1958 gives a slight insight into his reasons for liking the smaller narcissus in that he had only a small suburban garden with not enough room to grow all the many things he might wish. It is probable that this kept him from growing more seedlings of his own and I have a feeling that Joyce Rihill is the only one of his own that he ever registered. There is poignancy in this probability that makes one wonder about the choice of name. Who was Joyce Rihill? Does anyone know?

Note - If any reader has any information about the person Joyce Rihill or personal recollections about Mr. Dudman, the writer of this article would be glad to hear about it.



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LOCH LUNDIE

CLIVE POSTLES, Worcestershire, England

The wonderful Loch Lundie seems to have had a most successful year for producing prize winning flowers during 1984. I noticed in the U.S.A. it featured in many of the show reports. As Loch Lundie is one of my favorite flowers, I thought that readers may like to know a little of its history and achievements.

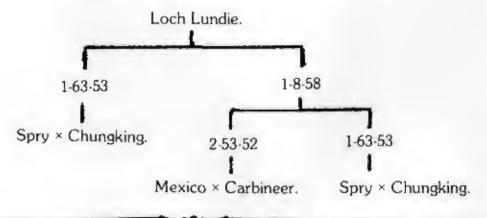
It was raised by the late John Lea from a long line of seedlings going back to the very start of his hybridizing program for red-yellow. Mr. Lea grew the most magnificent specimens, and used Loch Lundie several times in winning Engleheart Cup exhibits. He also had Best Bloom at the RHS Competition 1978 with it, and it was stated in the show report that "Loch Lundie was obviously one of the classics for the future." How right they were!

At the Daffodil Society Show 1984, there was a very fine flower in a second prize exhibit for twelve blooms. I considered it to be a contender for the highest award, but unfortunately the judges completely overlooked it.

My own flower of Loch Lundie used in the Richardson Trophy Class gave me a lot of pleasure as it had been kept in semi-darkness to hold the intense cup color.

The most impressive flower that I saw in 1984 was most fittingly at its birthplace, in the daffodil beds at Dunley Hall. A single bulb that had been unknowingly left down for a second year provided a flower that could have won in any competition. (All bulbs at Dunley Hall were lifted annually for commercial reasons.)

Both John Lea and myself have used Loch Lundie for breeding, and I hope that very shortly the selected seedlings from those crosses will be seen on the show bench.





Six is a number perfect in itself and not because God created all things in six days; rather the reverse is true, that God created all things in six days because this number is perfect.

St. Augustine

DIVISION SIX, THE CYCLAMINEUS HYBRIDS

ROD BARWICK, Claremont, Tasmania, Australia (from the Tasmanian Daffodil Council Newsletter, March 1984)

What an interesting group of daffodils the cyclamineus hybrids are. Here at 'Glenbrook' we only grow some thirty or so named cultivars from this division of "little flowers," but almost without exception each cultivar is a real individual and easy to recognize at first glance.

To define the predominant characteristics of this group of hybrids is not nearly so simple as first appears to be the case. Probably most are no more than small of flower and short of stem compared to the standard daffodils. Temptation leads one to say that the most outstanding feature is the reflexed perianth inherited from *N. cyclamineus*, but while Charity May, Dove Wings, Jack Snipe, and a good number more provide classic examples of reflexing, other members of the group display only minimal reflexing.

Again generally speaking, the trumpet or cup tends to be rather bell-shaped with some waisting and the pose of the flower slightly pendent for the first few days after opening, but exceptions to these two rules are also easy enough to find.

Perhaps the happiest characteristics of the Division 6 hybrids are that their flowers are very long-lasting and, once established, they have an excellent tendency to produce multiple flowering stems from each bulb. This gives an extremely long garden life as most of the cyclamineus hybrids start flowering early in the season, mid-August here. Due to their great durability they are still looking fine four or five weeks on, in mid-September, when many a flower of lesser constitution has already been and gone.

A most interesting facet of many of the Sixes are the curiously appropriate titles bestowed upon them. I well remember, last spring, a dashing lady dissolving in mirth when viewing our Peeping Tom. Perhaps thoughts of another association brought on the laughter, but it seems to me that Peeping Tom has a wicked outlook on life. The Little Gentleman has a name with which people seem to immediately identify. Many times when removing our exhibits from the Hobart show I have been especially asked for a stem of THAT LITTLE GENTLEMAN. Others such as Dove Wings, Cornet, Jetfire, and Tete-a-Tete have names with obvious associations, but are still so right for the flowers themselves.

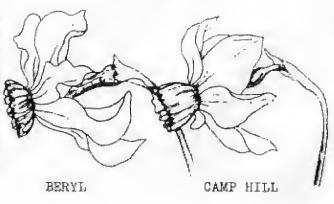
The genetic make up of the cyclamineus hybrids is gradually becoming more and more complex. A large number of early hybrids came from crossing pollen of the species N. cyclamineus onto various yellow trumpets.

Among well known examples of these crossings are the delightful Cyclades (Blanchard, 1948),

February Gold and March Sunshine (both Degraaf, 1923), Peeping Tom (Williams, 1948), Trewirgie (1928), Orange Glory (1920), etc., all Division 6 Y-Y.

GENTLE GENTLE species N. cyclamineus onto vario Among amples are the

Another early cross of importance produced Beryl (Williams, 1907). Beryl was bred by putting N. cyclamineus pollen onto a poeticus. This produced a hybrid with strongly reflexing perianth, opening lemon but "cleaning" to white, and a very short cup of orange. I think that, of its type, Beryl has yet to be surpassed for quality and charm. It is also a very valuable plant for breeding.

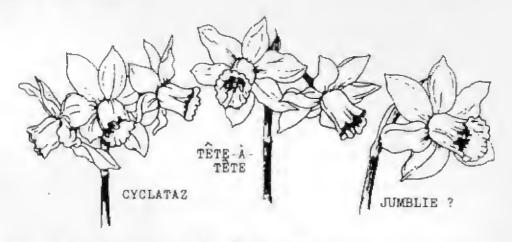


A most interesting development, Camp Hill, with white perianth and yellow cup, came from the unlikely cross Beryl × N.t. concolor. A lovely dual-flowered stem of Camp Hill was exhibited at Hobart in 1982, but I feel sure this hybrid ought to be classified as Division 5, triandrus, rather than Division 6.

Victorian Lindsay Dettman has introduced two attractive "cyclamineus" hybrids with strong triandrus connections, Harold Low, Division 6 Y-Y, and bred Charity May × Harmony Bells; and the dainty Peggy Low, 6 W-Y bred from the triandrus Laura open pollinated. Craig Broadfield exhibited a very neat bloom of Peggy Low at the 1983 Westbury show. This cultivar has a swan-neck much like Camp Hill, a characteristic more triandrus predominant I would have thought.

A fascinating series of miniature hybrids originated from the rather extraordinary cross Soleil d'Or (8 Y-O) × N. cyclamineus. The resultant seedling Cyclataz, with three blooms to the stem, was registered in 1923 as a tazetta, Division 8 Y-O. From the miniature Cyclataz open pollinated (but possibly selfed) came the delightful Tete-a-Tete, 6 Y-O, usually with two flowers to the stem.

Cyclataz self pollinated produced the superb miniature Jumblie, 6 Y-O. This is a prolific bloomer and often has, with us, three flowers to the stem and several flowering stems from each bulb. However, with close study, I find it very difficult to believe that the bulb grown and widely distributed here in Tasmania as Jumblie is the same cultivar as that which regularly appears in photographs in the American Daffodil Society Journals. Perhaps someone studying the single floret sketch of the local Jumblie included with this article might have some ideas on the matter? It seems possible that this cultivar, which is quite similar to Tete-a-Tete, and with crown between yellow and orange in color, might actually be another sister seedling named Quince.



Englishman Cyril Coleman, who died in 1980, was a man much celebrated for his work among the Division 6 flowers. His most famous cross was Mitylene (2 W-Y) × N. cyclamineus. Three pods yielded over one hundred seeds from which came three well known and outstanding sister seedlings, Charity May, 6 Y-Y, Dove Wings, 6 W-Y, and Jenny, 6 W-W. I have not yet grown Jenny, but both Charity May and Dove Wings are very beautiful little flowers and for the past thirty years have set the standard by which others in their class have been judged. In all likelihood they shall continue to be the measuring stick for many years to come.

From these three sister seedlings have come a number of good flowers, mostly raised from open pollinated seed. Last year Mrs. Beatrice Coleman very kindly replied to an enquiry of mine concerning some of the cyclamineus hybrids. Of particular interest were her comments that she and Cyril had found direct crosses with Dove Wings, Jenny, and Charity May did not give much in the way of improvements, yet strangely, "The odd, interesting children from these famous three that appeared in the wild were far better than the planned marriages."

Incidentally, it is very pleasing to know that the complete stocks of the late Mr. Coleman's bulbs are being grown on as The Coleman Collection at Wisley, Windsor Savill Garden, and the New University of Ulster at Coleraine.

The late J.L. Richardson of Ireland collected seed produced from pollen of Jenny or Dove Wings onto the 1 W-Y Trousseau. This cross produced Titania, 6 W-W, a small rounded flower of creamy-white throughout. While the perianth is but slightly reflexed, this flower has the beautifully formed trumpet one associates with *N. cyclamineus* and phenomenal lasting powers as well.

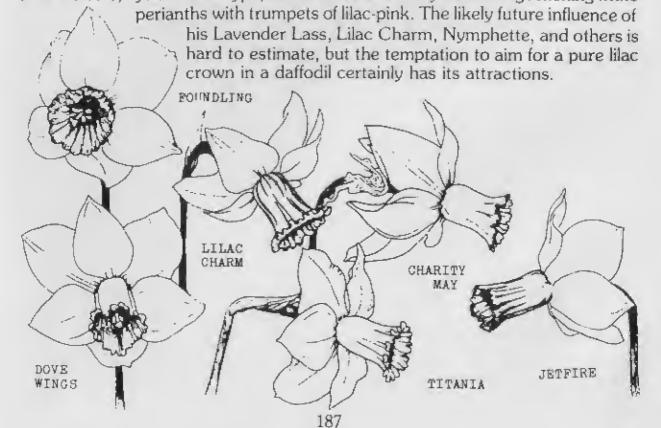
Of far greater fame than Titania is Foundling raised by Carncairn Daffodils in Northern Ireland. Foundling was bred from Irish Rose, 2 W-P, crossed with Jenny. It is an exquisite little flower with well reflexed perianth and shortish crown of deep pink—and it has an enviable record of countless successes on the show bench as testimony of its quality.



Wheatear 6 Y-WWY, bred by Grant Mitsch

Grant Mitsch in the U.S.A. has produced some lovely Division 6 flowers. His Jetfire with smooth, rflexing yellow perianth and trumpet developing to intense orange-red is a real collector's item. It is only one of many, many beauties from this gifted hybridist.

Many growers around the world are now trying their 'hand' at breeding cyclamineus hybrids—far too many to mention here—but I must comment on the work of Brian Duncan in Northern Ireland. Mr. Duncan has introduced a series of small flowers, cyclamineus type, bred from Roseworthy and having reflexing white



GERARD H. WAYNE



A variety of Brian Duncan's pink sixes include (L to R) Elizabeth Ann, Urchin, Reggae, Bilbo, and Tiger Moth.

Coming nearer home, Victorian Fred Silcock, on a visit to Tasmania last spring, brought with him a flower he had bred from a 2 W-P seedling crossed with N. cyclamineus. This was a truly outstanding flower, posed at an exact right angle the stem and with white perianth of excellent reflex. This set off the most perfectly formed trumpet, belled and waisted, that one could possibly hope to see. The trumpet was a color of soft creamy-pink. What a lovely bloom it was!

Here in Tasmania the breeding of cyclamineus hybrids has really only just begun. Hopefully the involvement of our hybridists in raising and showing flowers in Divisions 1 to 3 will encourage those same high standards of quality to be applied

Temple-Smith's 2/83 (N. cyc. x Ristin)

Temple-Smith's 16/81 (Jobi x cyc.)

Temple-Smith's 2/83 (N. cyc. x cyc.)

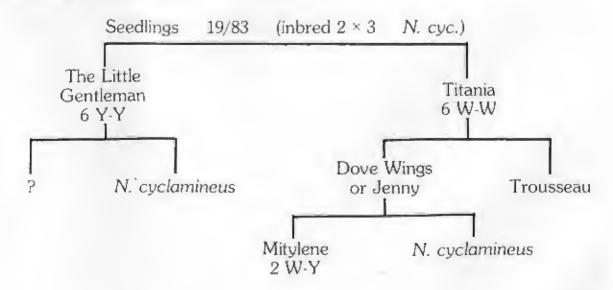
Mike Temple-Smith has already produced several little flowers of merit. At the 1983 Launceston show, he secured the award for Champion Divs. 5—12 with a fine 6 Y-Y bred from N. cyclamineus × Ristin. Other of his crosses which have produced notable blooms include My Word × N. cyclamineus and N. obvallaris × N. cyclamineus.

At the 1983 Hobart show, Ron Gilbert exhibited a fine 6 Y-Y bred Jobi × N. cyclamineus. It had a neat,

straightish trumpet and rolling, reflexed perianth segments. This bloom won the special T.D.C. Heazelwood Trophy and Champion Divs. 5—12 awards, no mean feat considering there were some 150 Div. 5—12 flowers entered on the Hobart benches.

Miss Maren Bjerring has produced and named a couple of very worthy cyclamineus type hybrids. The Little Stranger is a small flower with glistening white perianth and bright rose crown. Cuckoo has a small, wide, bowl shaped crown of orange-enamel and well-reflexed white perianth. It is rather late flowering. I have only just, at the time of writing, acquired a bulb of each of these cultivars, but I feel confident that as well as being so attractive in their own right, they are also going to prove excellent breeding material. A cross of Beryl × Cuckoo will certainly be of great interest.

At home, my own efforts at crossing cyclamineus hybrids have not produced an abundance of seed—instead records show that many crosses have not produced any seed at all. Pollen of Jackson's Velask (2 W-P) onto Beryl has produced two good flowers, both Division 6 W-Y; while Titania pollen onto The Little Gentleman has given some interesting seedlings of fairly varying characteristics. This latter cross is interesting in that inbreeding to N. cyclamineus was effected.



Barwick's 11/83

(Beryl x Velask)

I do think inbreeding between hybrids descended from *N. cyclamineus* will, in the future, provide some fascinating results. A number of the hybrids are not willing breeders, so last winter I put a considerable amount of thought and planning into collecting a better harvest of Division 6 seeds. As I don't have the species itself, Mrs. Joyce Lee very generously sent me, in August, a quantity of *N. cyclamineus* pollen and this added considerably to the range of crosses to be attempted.

As the productivity of some of the crosses may be of interest to other breeders I

will list just some of the seeds collected.

INBRED 1×2 N. CYCLAMINEUS Peeping Tom \times N. cyc. 2 pods, 4 and 2 seeds The Little Gentleman \times N. cyc. 1 pod, 18 seeds Cyclades \times N. cyc. 1 pod, 4 seeds

INBRED 1 × 3 N. CYCLAMINEUS
Titania × N. cyc. 2 pods, 9 seeds in each

INBRED 2 × 3 N. CYCLAMINEUS Cyclades × Titania 2 pods, 3 seeds in each Jack Snipe × (Beryl × Velask) 1 pod, 3 seeds

Other seeds collected which might be particular interest include Beryl × Dimity, seven seeds, and N. papyraceus (Paperwhite) × N. cyclamineus, two pods yielding a total of four seeds. If the last cross could produce a white equivalent of Cyclataz that would really be something! However, the "seeds" collected were

paper-thin; so they seem far more likely to produce nothing.

Before closing, a look at the show standards by which cyclamineus hybrids are judged might be worthwhile. If evaluated by the point system, one would expect the winning show flowers to have scored well for the usual qualities of condition, substance and texture, color and stem. In form one assumes that other things being equal (which they rarely are) then the more reflex in the perianth, the higher the points to be awarded. Regarding size, I guess that here normal standards go into reverse and that a fine bloom of a good little cultivar beats a fine bloom of a good big cultivar! For pose, Item 26 of a recent English publication, "Notes for Guidance of Judges at Daffodil Shows," quotes cyclamineus hybrids as "with the corona at an acute angle to the stem." In our garden almost all the cyclamineus hybrids mature with their flowers facing straight out—virtually at right angles to the stem. The English System would obviously give higher points to flowers "looking down" to some degree, but to me this is largely favoring immature blooms. No separate show points are allocated for character or charm (or what in horses is referred to as presence), yet with the Division 6 flowers this is an integral part of their attraction. I expect that charm is the foremost quality by which most of the non-showing public judge this group of flowers.

And finally, to look at future possibilities, it seems reasonable to predict that the choicest cyclamineus hybrids yet to be developed will have prolific flowering habits and blooms of fine texture and great durability. Nature has already provided a strong, in-built quality on which these particular tendencies may, with sensible breeding and selection, be further developed. In form and color perhaps the future may bring flowers with Turk's cap perianths of glistening white and slender, bell-trumpets of hot, rosy-purple. At least we can dream of them. But then it's only 1984

and Big Brother—so who knows what the future has in store?

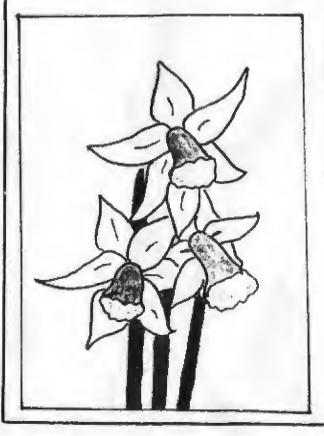
Grant Z. Mitseh Novelty Daffordils

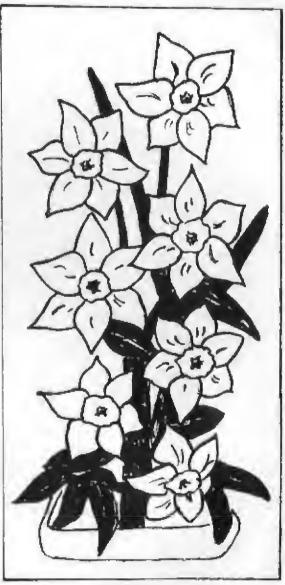
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THE COVER PHOTO

was taken at the Northern California Show at Walnut Creek. The spectacular pots are filled with blooms of Chapeau, *N. tazetta* Compressus, Hawera, and *N. triandrus loiseleurii*. The pots are the work of Sid Dubose and Nancy Wilson. (Gripshover photo)

IS THERE SPRING IN CALIFORNIA? OR EAST IS EAST AND WEST IS . . . WONDERFUL

RICHARD EZELL, Chambersburg, Pennsylvania

Ages ago in my impetuous and imprudent youth, I published in these pages a remark to the effect that the state of California had no season that could properly be called spring. Of course I had never been to California, and so was relying upon the testimony of obviously unreliable witnesses. Happily, the lynch mob sent out from the Bay Area failed to find me. But a letter from Ken Dorwin did: nettled but good humored, he cited copious statistics designed to convince me that California had no season except spring—and had it all year round. I resolved immediately to check the situation out and, if necessary, correct any injustice that might have been perpetrated by my casual and uninformed comment.

Now, ages later, my good resolution is being carried out. I cannot, alas, confirm the presence of a twelve month spring, but am obliged to report that for at least ten days in the middle of March California, from Corona Del Mar up to Walnut Creek, has a florious spring indeed, and one filled with handsome daffodils in the gardens and the shows of members of the Southern and Northern California Daffodil Societies.

The first of those gardens I saw, Marilynn Howe's, greeted me with a hugh clump of the tazetta hybird Avalanche, its great trusses of florets held proudly up almost hip-high. And this clump wasn't even in her garden proper, but right out on the street beside the driveway. Marilynn's response to my slack-jawed admiration was just what you'd expect: "Oh, Richard, you should have been here last week; it was fairly nice then." Marilynn's garden is a small backyard affair located smack in the middle of urban Los Angeles, where temperatures rarely fall below 40° F. or rise above 85°. (Perpetual spring?) Her exhibition daffodils are grown in raised beds. Did I say raised? They are raised fully twenty-four inches, constructed of cement blocks, and filled with an artificial soil mix designed at the University of California and widely used by growers throughout the area as the medium for potted daffodils. Because her space is severely limited—less than 400 square feet in beds—Marilynn is careful to grow only outstanding cultivars. From her small garden this season came one Gold Ribbon winner and the runner-up for that award at two other shows.

Up and out of the city a bit, in the hills above Anaheim, the garden of Nancy and Gene Cameron is not so rigorously confined to daffodils, but is a beautifully landscaped arrangement of many perennials, shrubs, and a few citrus trees (from which Gene casually picked our breakfast fruit to the naive amazement of this eastern vistor). Nancy, like most California daffodil growers, had a number of bulbs outdoors in pots. It was fun to watch her interrupt her cooking chores for a few moments to reach through the kitchen window and turn the pot of Loch Lundie on the sill to check on the progress of its buds.

Farther up and out, at La Canada, Polly Anderson's wonderfully relaxed garden (she says what she grows best is weeds) fairly teems with rare bulbs and plants of many kinds, lots of the bulbs I never even heard of (and, I suspect, some she's never heard of. Did you ever see seven or eight

different kinds of haemanthus in one garden?)

Here, practically in the shadow of the snow-capped peaks of the San Gabriel Mountains, Polly's garden includes 75 year-old orange trees...under one of which is nestled a most charming tiny cyclamineus hybird seedling of her own raising, quite like Flyaway, and just as appealing. You'll hear more from this one, if it will only grow away from its favorite orange tree.

Three hours or so up the coast the famous establishment of Bill and Rosemary Roese is the world's leading daffodil zoo, where Rags the dog chases the cats but doesn't hassle the 200 pigeons, the 5 parrots, or the half dozen fancy ducks.

Bill grows his daffodil stocks in long beds six to eight feet wide. His soil, unlike those I saw farther south, is rather sandy. Rainfall is scant throughout the daffodil growing areas of southern and central California. Everyone waters, perhaps no one more than Bill—in the midst of his blooming season this year he'd had no rain in over two months.

The Roeses must surely run one of the world's smallest-scaled commercial daffodil enterprises, but don't let that fact cause you to overlook them; they have some great things to offer: their own seedlings, a few of friends like Ken Dorwin and Madeline Kirby, and good stocks of a couple of truly excellent rarities, Lemon Candy and Gracious Lady.

At the bottom of San Francisco Bay Mary Lou Gripshover, that marvelously transplantable mid-westerner, is growing her daffodils in the oddest of settings. Living for now in an apartment with no ground about, she set out for the country to find a plot to rent, but before driving five minutes—still in the center of the urban sprawl of the city of Sunnyvale—she came upon a five-acre cherry orchard. Braking to a stop, she accosted the owner, and in less time than it took Eve to get Adam to eat the apple, she had talked him into all the space she needed of fertile, fenced-in, daffodil growing area. And he not only wouldn't accept any rent, but provided cost-free weeding services.

(Paradise she may have found, but it has proved a one-year-only paradise; she's been evicted even as Adam and Eve were...though for no

comparable reason, so far as I know.)

Most of her bulbs, moved from Tennessee last fall, made the transition in grand style: in particular, her pinks, doubles, and white trumpets seemed healthier and happier than ever before.

Up at the top of the Bay, east of Berkeley, in Walnut Creek, Jack Romine operates his Tetraploid Haven. He doesn't so much raise daffodils, or daylilies, tulips, roses, or vegetables...as he raises tetraploids. Or, rather, he raises diploids, and he "tetras" them. In so doing he has accomplished some remarkable feats. I won't go into such marvels as his tetraploid Swiss Chard (you may well see it some day in your vegetable seed catalog), but must comment on two of his daffodil creations. First he "tetraed" a clone of N. bulbocodium obesus, and then crossed it with pollen of standard daffodils. The results have produced the most interesting and attractive specimens yet seen for classification in Division 12. Little Soldier (12 Y-Y) (N. bulbocodium obesus × Chemawa) has been registered, and equally good is a 12 W-Y bulbocodium seedling from pollen of Festivity. Back home in Chambersburg I described these little wonders to Bill Bender, who asked, "But what did a cross of bulbocodium and Festivity look like?"

"Well," I replied, "it looked just exactly halfway between the two parents."

"Sounds awful," he said.

"Yes, but it isn't awful at all," I answered. "It's surprising, and unique, and neat, and...well, cute. Oh, you'll have to see it." And I hope all of you will.



Little Soldier

The two California shows I saw, that of the Southern Society at Corona Del Mar and the Northern at Walnut Creek, were particularly fascinating in their differences from eastern and mid-western shows, the first notable difference being the settings in which they were held. At Corona Del Mar, Sherman Gardens is a beautiful experience, less strikingly so to the natives, I'm sure, than to an easterner unaccustomed to the heady scent of jasmine emanting from the great hanging baskets surrounding the display area, or to the vast beds of multihued primroses on all sides. (It is easy to understand how daffodils have more trouble attracting attention in California than in Pennsylvania: they have so much else there.)

At Walnut Creek the show was held at Heather Farms Garden Center in a light, airy room with picture windows all round providing vistas of rolling hills, and even of Mount Diablo in the distance.

Both shows featured better miniatures than I am accustomed to seeing in the East (outside those beauties they grow in Virginia) and the best tazettas I ever hope to see. There were few blooms from Divisions 3 and 4, and almost none from 9. But in California the season is so stretched out, relative to that in the East, that later shows there would, I'm sure, produce more in these later flowering Divisions.

The most exciting thing about the California shows was the number of seedlings in competition. At Corona Del Mar the Rose Ribbon went to a flawlessly elegant yellow cyclamineus hybrid of Gerard Wayne's which narrowly beat a three-floreted, pink-cupped triandrus hybrid of Harold Koopowitz's that represented a distinct and attractive advance in its class. Harold won the Miniature Rose Ribbon with a bulbocodium seedling. Here too I saw my first seedlings of my old friend, Helen Grier, the Dean of Southern California hybridizers; additionally there were handsome seedlings from Sidney DuBose throughout the show.

At the Walnut Creek show a week later Sid's seedlings were in competition for top awards in many areas, winning the trophy for best white with 435-12 (2 W-W), an Easter Moon seedling which triumphed over good blooms of White Star and Silent Valley, as well as a couple of other promising white seedlings.

This show was essentially dominated by seedlings, the pink trophy going to Bob Jerrell's named Eileen Squires, and the Gold Ribbon to a named, but unregistered, seedling of Ken Dorwin's, Miss Primm, exhibited by Bill and Rosemary Roese, who also took the Rose Ribbon with their

3/17/85 (2 Y-R) (Air Marshall × Heathfire). The Miniature Rose Ribbon went to Mary Lou Gripshover for an open-pollinated Baby Moon seedling.

Throughout my visit I had been impressed with the pot-grown daffodils I had seen—at Corona Del Mar a blue ribbon was awarded to a lovely pot of the triandrus hybrid Ruth Haller, exhibited by...Ruth Haller—but at Walnut Creek I saw the four best pots of daffodils ever. I kept going back to admire them time after time. One was a small pot of the species N. triandrus loiseleurii, exhibited by Nancy Wilson, which was crammed with nine graceful blooming stems. The other three pots were super-crammed with blooms. Really. Sid DuBose entered pots of Chapeau, N. tazetta Compressus, and the miniature, Hawera, in which he had planted two or three layers of bulbs, one on top of the other. The amount of bloom was simply staggering to one who had seen nothing of the sort before. Surely, the difficult trick must be the management of the pots to get such symmetrical arrangements of the blooms, and all open together. (Madame Editor, please talk Sid into an article on super-pot culture.)

Yes, Virginia, there is a spring in California.

As you can no doubt determine from the preceding, I have been utterly won over by the climate, the flowers, and the daffodil people of California. There are, to be sure, some negative aspects: as Helen Grier points out to newcomers in an excellent "guide" to growing daffodils in Southern California that is distributed free by the Society there, the expression "sunny California" also means "drought-stricken California," and there are adobe soils, and Santa Ana winds, and the lack of chilling temperatures; plus there is the fact that land can cost as much per square foot as gold does per ounce.

But in my brief visit I saw excellent flowers and wonderful people determined to grow them well and to make new ones; and I hardly scratched the surface of gardens and people I'd have liked to have seen. Ah, but next time...



Rx FOR BASAL ROT

TOM D. THROCKMORTON, Des Moines, Iowa

(from the Hybridizer's Robin)

From time to time, almost everyone seems to be afflicted with basal rot; and over a period of thirty-five years, I have had my share of it. The worst losses I ever had came during a period of time when I was doing the most to prevent them. Early in my daffodil career, we left one automobile out of the double-car garage and put the newly dug bulbs on the floor in thin layers (not in piles) and left them there for couple of months. There they would dry; and sometime later in summer or early fall, I would take a thumb and knock away the clay and outer dead scales and uncover the bulbs before planting. I always shook them up in a sack with some form of mercurial fungicide, then planted, and they did fairly well, although losses from basal rot were certainly apparent each year. I then decided to do a much better job; and after drying the bulbs for awhile, as above, I dipped them into a solution of malathion and formaldehyde and spread them out in a cool room in the cellar. From one-third to half of the bulbs subsequently spoiled and many of them proved hollow shells filled with Tarsonemius Mites. After this catastrophic occurrence, I began treating the bulb beds just as the foliage was well matured with a rather strong mixture of formaldehyde inserted in the soil by means of a Ross Root Feeder. This, as you can well imagine, caused the foliage to die down fairly soon, but when the bulbs were dug they were all clean, firm and healthy; and I thought my problem was at an end. However, treating a large area with formaldehyde using a Ross Root Feeder came to be an impossibility. When I first heard about benomyl (Benlate), no one knew anything about its usage with bulbs or its dosage or anything else. I had, at that time, bought a hot water bath that would hold about fifteen gallons of hot water at a constant temperature and was determined to give my bulbs the hot water treatment from time to time. I have never had any known nematode problem, but I had heard from the late Guy Wilson who said that a couple of hours of hot water treatment "toned-up the bulb beautifully." I was willing to have my bulbs toned-up, so procured the equipment at no small expense. It seemed to me that the ideal thing to do then would be to add some of this new benomyl to the water, which I did in rather uncertain amounts but it certainly made it good and cloudy, and the bulbs were treated for two hours and then allowed to dry on the garage floor again. They were then hung in rough mesh bags from wire coat hangers beneath an overhanging board deck on my house. This allowed them to dry out for a week or ten days and they were then transferred to a clothes line in a room in the basement where the air conditioning vents played directly on them throughout the rest of the summer. This was an extremely satisfactory way to handle the problem and did extremely well. However, this heat treatment proved to be an attempt to "gild the lily" and I desisted after learning about the "cold dip." I have been convinced for years that

the basal rot fungus is prevalent in any and every soil and just needs a handy place to make a good start. It does require heat and it does require moisture and if either one of these prerequisites is not available, basal rot does not occur. I am also convinced that basal rot is by and large often a systemic disease and bulbs which appear perfectly normal for a year or two may come down with basal rot later on. Believing it to be a systemic disease, I have for the past seven or eight years dug my bulbs when the top foliage is still green enough to make a good handle. The roots are left attached to the basal plate, the leaves are cut closer to the bulb and the bulbs are dropped into a large garbage can filled with a good mixture of Benlate and water. Don't ask me the exact proportions but a couple of handfuls of Benlate will usually do the job in a large garbage can. They are allowed to remain in contact with this material for at least one-half hour and are, of course, in mesh bags while in the soak—obviously keeping the varieties apart. I might also add that before the bulbs are placed in the Benlate mixture, they are washed off rather vigorously with the garden hose to remove most, or all, of the clinging dirt and leave the clean white roots dangling. I am convinced that the roots take up Benlate from the solution and what may be a systemic infection in the bulb may well be cured by such a treatment. As a matter of fact, I have taken several offsets from bulbs rather badly diseased with basal rot and have given them this treatment and they prospered afterwards without difficulty. After thirty minutes in the bath, the bags are removed, hung on wire coat hangers and aired beneath the wood deck as before. Then they are hung in the basement where the constant stream of air conditioning keeps them dry and fairly cool.

Following the above measures, I can count the bulbs I have lost on probably one hand in the past five or six years. For many years I was really unable to grow good white daffodils. But now, the garden is filled with them and I give them no particular thought—basal rot just does not seem to be my enemy anymore.

I suppose it is possible that basal rot fungus may build up a resistance to Benlate or almost any other fungicide. However, in view of the multiple strains of fungus to be found in thousands of soil areas, I believe it will not be a problem for some time. Immunity problems of the type suggested in the other letters build up in only a limited geographic area, i.e., as one floor in a hospital or even one hospital. Later on, as is the case with penicillin, the mutant forms do give some difficulty. However, it is a well-known fact that the staphylococci present in our homes and working surroundings are vastly different from those present around hospitals and closely defined areas of that type, and most of the "rural bugs" still remain highly sensitive to relatively small doses of penicillin. However, I cheer all of those who are continuing their research into other antifungal agents and if and when Benlate should fail, I am certain that other products will be waiting in the wings. I can say, however, that a super-strength, super-long benomyl soak is not without its drawbacks. I did, as experiment, soak a double handful of Broomhill in a cold soak of Benlate for twenty-four hours. These

were then treated as the other bulbs; and when planting time came, I shared part of these with a friend in another part of the country and planted my own half in my garden. The ones I planted all had severely deformed flowers. It appeared as if really some very toxic agent had appeared somewhere on the scene. It was not long after this that I received a note from my friend stating that the Broomhill bulbs I sent her all put out deformed flowers and what was the problem. The problem, of course, solved itself in the next season when all plantings produced beautiful blooms of Broomhill, several of which were entered in exhibition. At the time of the cold soak, the flower bud was obviously in the process of being formed and the material taken up by the roots had exerted a malign influence on its development. So much, however, for the proof that benomyl is a systemic drug. So much for basal rot!

BETWEEN TWO WARS—A LONG TIME AGO

JAMES S. WELLS, Red Bank, New Jersey

November 11th, 1918. The war to end wars was over and my very earliest recollection is of driving around the city of Leicester with my father in his motorcycle. I was wildly waving a Union Jack in the side car. Later that winter I remember being extremely ill with the flu that swept right around the world, but 1921 was the year we first went to the Scilly Isles. I was just over six years of age.

Everyone was climbing out from the effects of the war, including the daffodil industry in the Scillies which had, perforce, been neglected during the four years of conflict. The Tresco Bulb Gardens, owned and operated by the Dorrien-Smith family, had decided on a substantial program of rehabilitation for which a bank loan had been obtained, and my father was engaged as the new manager. We moved there early in 1921, a year which produced one of the longest and hottest heat waves yet recorded.

Tresco was sheer paradise for a young boy. There were no cars—there are still none on Tresco to this day—and apart from a few hours of indifferent schooling, I was left to my own devices. Roaming the island, I came to know every detail, every point of interest, and spent countless hours shrimping at low tide, gathering buckets of small clams which we called cockles on the flats of Pentle Bay, and wandering wherever I wished without let or hinderance. My memories are vivid and when I look about me now, here in metropolitian New Jersey, I realize how fortunate I was to have had a time of such complete freedom.

I had no inkling of what was to come; and therefore as autumn moved into winter and the bulb season began with Paper Whites and then Soleil d'Ors, I began to see for the first time the narcissus season unfold in all its variety and richness.

Bulbs were grown, then and still, in sheltered strips of land called "gardens" which were surrounded with thick and tall hedges usually of *Escallonia macrantha* with its pungent smell, shiny sticky deep green leaves, and bright red flowers. Some gardens had hedges of veronica as we called it then -now it is known as hebe—and in some areas a new plant, a form of pittosporum from New Zealand, was being tried. These hedges were essential in the open field cultivation of narcissus to provide protection and shelter, from the devastating gales which always swept in from the Atlantic sometime each winter. Even with wind velocities of up to seventy miles per hour, the area inside the gardens could still be quite tranquil, and the flowers would not be harmed.

At the base of every hedge there was a thick line of daffodils of all kinds, remnants of the varieties which had in past seasons been discarded as rubbish when the land was cleared for the rotation crop of early potatoes. Many bulbs rotted, but sufficient remained and eventually became established to form dense thick clumps, filled with blooms. Everything could be found somewhere, mostly old Leedsii types usually not now in production. But occasionally one would come across gardens which had cropped one of the current varieties, and there one would find Golden Spur, Sir Watkin, Princeps, and Maximus, but only an occasional

Horace, which then was one of the newest forms of poeticus.

I wandered the gardens interested in the main crops coming along but mostly to see what I could find in the wild types growing along every hedge and headland. The scent was heady in the packing room where all the day's pickings of Sols were set into a deep warmed pit to drink water overnight and open up before being bunched for market the next day. Then they were taken by small boat to the Scillonian at St. Marys which sailed late in the afternoon to reach Penzance in the evening. The flowers were immediately put onto an overnight train and next morning—two days from picking—were in the market at Covent Garden. I have a pot of Soleil d'Or now in flower in my greenhouse and each time as I pass, the scent brings back vividly the sensations of more than sixty years ago.

On one of my trips through the gardens, I noticed a "rogue" in full flower in a bed of Elvira. I had no idea what it was but I picked it, which was not the thing to do. Later that day I had been asked to Tresco Abbey to have tea with the Dorrien-Smith children, Tom and Ann, who were about my age. In that isolated spot there were few people for me to play with as a youngster and the same was true for them. So occasionally I was asked to

tea, an exercise which I found somewhat intimidating.

The Abbey was dark and rather grim, with long corridors lit with fishtail gas jets—no electricity of course—and I felt, and indeed was, very small. We had gathered in the drawing room and tea was about to commence when in comes the Major, Major Arthur Dorrien-Smith, a broad and burly man of whom I was most certainly in awe. Marching up to the tea tray for his cup, in a booming voice he said to the room, "Who picked that rogue in the bed near Call's house?" I knew at once that it was

I, but no one gave me a thought; everyone else denied the crime, and I made myself as small as possible. But the sinking feeling I had when that booming voice asked the awful question is still very clear.

Time passed. We had to leave Scilly because I could not get a proper schooling; and this, combined with family problems, made us move back to the mainland. I was desolated at leaving my beautiful island, for I could

not imagine that I would ever see it again.

In 1926 we were living in Bournemouth on the south coast of England. Our family had fallen on rather hard times but my father managed to keep us going by writing, mainly about bulbs to trade papers in both England and this country. Thus he came to the notice of a Mr. R.F. Calvert who wished to publish a book on daffodils and he engaged my father to plan it and then ghost write it. Mr. Calvert had access to many valuable and extremely scarce books from the Lindley Library, which came in a steady stream to our home while he was writing. The book was published under the title of Daffodil Growing for Pleasure and Profit. In this there is also one chapter written under my father's own name.

Mr. Calvert had taken up the growing of new daffodils at Coverack in Cornwall where he had a substantial collection at this time. He put out a most elegant catalog for the Carnsulan Nurseries with colored illustrations. A letter arrived from him one day requesting my father to come down to Cornwall to assist in lifting some of his newer and rare stocks. One in particular was of great importance. There was only the one bulb, for which a substantial price had been paid. (I believe about 50 pounds or \$250 then, being probably equivalent to at least \$2000 now.) So armed with a new razor blade, my father spent three pleasant days in Cornwall, lifted the bulb, removed the one offset, and planted them back. The bulb was called

Fortune.

I have been back to the Scilly Isles many times since, and every time I go it casts the same wonderful spell over me that it did when I was young. I returned first some ten years later as a young adult with a friend. Then I had a holiday there with a young lady I thought I would marry—but did not. Finally, after the second world war was over I returned with my wife and our two sons. They all love the islands as much as I do, and we had a wonderful time.

But one of the marvels to me is to come round the corner of Tresco in the launch and enter Pentle Bay. In 1921 it was my favorite spot, a wide crescent of clear, clean sand with gentle waves lapping the shore. I know that if I were to catch a plane today and return there it is the one place I know that has remained exactly the same for the past 65 years. And there are few places in this world about which this can be said. I hope that it remains as it is, untouched and unspoiled, a joy forever.

SOME ROMAN GARDEN 'NARCISSUS' OF 1638 A.D.

LES HANNIBAL, Fair Oaks, California

On reading E.A. Bowles's Handbook of Narcissus, one gains the impression that there was no end of confusion over daffodil nomenclature during the fifteenth and sixteenth centuries, and that most names were as long as one's arm. Recently the writer had the occasion to examine the two chapters on "Narcissum notae & cultura" in I.B. Ferrarii's rather rare Florum Cultura of 1638 which describes the identities and culture of various flowering plants grown in Roman gardens around the years of 1625 A.D. This 500-page volume is unquestionably one of the first good gardening dictionaries published using movable type and copper plate etchings, since it was issued only a few years after such type and etching techniques came into use. At the time it represented an outstanding deluxe edition, being very well organized and written (in Latin, obviously), and admirably illustrated. Unquestionably it represented quite an expensive undertaking.

In that period the term Narcissus included all of the known Amaryllidaceae, not just Daffodils or Tazettas, so we find the Mediterranean Pancratium, Ismene and Leucojom included along with several recently introduced South African Cape Amaryllidaceae. It was only in 1500 that the Portugese under Vasco de Gama had found and explored the Cape coastal area so these South African bulbs were a new acquisition, and the fact that they were recognized as Narcissi (Amaryllidaceae) speaks well for Roman botanical integrity at that time. Remember this was 100 years before Linnaeus existed. Several excellent etchings, and one rather questionable one, of these Cape bulbs were included which aids identification. And we find that the *vulgar* or common name of *Amaryllis belladonna* was then 'Donna Bella'. Three variants of the A. belladonna are described. So under the index of Narcissi we find the following bulbs listed. The spelling is as then used:

Narcissus Anglicus N. Byzantius (N. tazetta var.) N. Corniculatus maior & minor (Meaning horned) N. Epidaurius (showing gold?) N. Flauus (Meaning pale yellow) N. Incomparabilis candidus calice flauo. (N. incomparabilis var.) Candidus major & minor Exflauo in sulphureum languens Perpetuo flauus ('Sulphur Phoenix' type?) Sulphureus flore multiplici Sulphureus summo calice luteo N. Indicus e rubro croceus flore liliaceo (Cybistetes longifolia) N. 1. Liliaceus diluto colore purpurascens N. I. Saturo colore purpureascens N. I. Liliaceus Sphaericus (Brunsvigia orientalis) N. I. Puniceus gemino latiore folio (Haemanthus coccineus)

(Vallota?) N. I. Virginiensis flore purpurascent (N. serotinus?) N. Iuncifolius albus autumnalis (N. watieri?) Albus major & minor vernus albus sulphureo calice

N. Luteus maior amplo calice & folijs continuatis

N. Maior foliis conuolutis (Overlapping or convolute petals)

N. Maior calice tereti & folijs angustioribus (Poeticus)

(N. jonguilla var.) N. Minor odoratus, simplex & multiplex

N. Pallidus folijs reflexis (N. triandrus/N. odorus?)

Candidus foliosus Candidus simplex Pallidus simplex

N. Montanus serotinus sieu Musartus

N. Narboronensis (Sternbergia species from southern France)

N. siluestris

N. Roseum major & minor (Leucojum roseum forms)

N. Stellatus

For those having difficulty with Latin, particularly sixteenth century Latin, the letter v is often represented by u and j by i; thus *flauus* is flavus and major is major. Calice is calyx or corona while folijs are the perianth segments. It is near impossible to correlate the Roman descriptive names with those used for similar bulbs imported into Holland or England since the northern European botanists were an independent group and created their own nomenclature quite disregarding that established by the Jacobian monks. A translation of the Ferrarii Latin text may clarify the identities more closely. However, several things are obvious: the Roman horticulturalists knew their plants well and their recommended methods of culture are practically modern. Another feature was that they used binomial nomenclature quite extensively 150 years before it was adapted in northern Europe through the efforts of Linnaeus. And finally Ferrarii and his Jacobian monk associates had a far better understanding of what plants constituted the Narcissus (Amaryllidaceae) than Linnaeus; For example, the identification of Haemanthus coccineus as a Narcissus shows acute botanical understanding, as Laurent Heister of Brunsvigia fame considered the etching and description to be allegorical since he took the five-parted spathe valve to be petals, which they are not despite their red pigmentation.

Geographically, Rome was in the heart of the Mediterranean 'Bulb Land' so one would expect to see more narcissus forms in use. We find several iris species and a dozen tulip, with some called 'corrupted.' Hybridization was unknown then as far as we know, so we suspect the bees did the 'corrupting.' As for planting instructions, we note one mythical etching showing the goddess Luna in her chairot wearing a new moon crown. Her cherubs are carrying bulbs while she points to Scorpio in the sky. If someone is interested, who is well versed in Latin, I'm sure that a number of us would appreciate a complete translation of these two chapters. Perhaps we, too, should plant our bulbs under the new moon while Scorpio is high in the sky.



"Bulb Planting Time," from G. Ferrarii's Florum Culture, 1633

A house with daffodils in it is a house lit up, whether or no the sun be shining outside. Daffodils in a green bowl—and let it snow if it will.

-A. A. MILNE, Not That It Matters (Dutton)

A CHRISTMAS BOUQUET

BARBARA M. FRY, Rosewarne, England

To Scillonians it would be quite normal to be able to pick *N. tazetta* Soleil d'Or and perhaps the last of the Paper White for Christmas, following burning over or some other treatment to advance the crop. (See ADS *Journal*, Vol. 20, No. 4.)

In the less favorable climate at Rosewarne Experimental Horticulture Station, Camborne, it is more remarkable to have tazettas flowering naturally in open ground by Christmas without any treatment.

The tazetta seedlings which I raised at Rosewarne are in several series. The earliest to flower—from October to December—were bred from just four parents pollinated in 1969. All have yellow perianths with coronas varying from yellow to gold through to orange-red. By Christmas, 1984, these had finished flowering.

So our Christmas bouquet was made up of different types and colors of tazettas. Probably the most exciting flowers came from pollinations made in 1976-77-78 from which I selected a number of flowers with white perianths. These are quite unlike the earliest flowering white tazettas such as Paper White and N. tazetta Orientalis which will not flower outdoors at Rosewarne. Most of these very early white seedlings are derived from Gloriosus which is a spring flowering cultivar. They are vigorous and more robust than their parents.

Some years ago we had two or three bulbs each of four seedlings from Israel which were said to be early and have 'Sol' blood in them. After using them for breeding (under glass) they were sent to Scilly. Unfortunately they did not like the cooler climate compared with Israel so they pined away and died. Gloriosus was the only successful pollen used on them, resulting in a handful of selections. They have white perianths and yellow, gold, or bright orange coronas. A few have slightly reflexing perianths which give them a certain charm.

We also have selections from Gloriosus × Paper White which have white perianths of varying shapes and sizes and citron coronas, a few of which develop cream. These are vigorous and have up to twelve florets on a stem.

Three from another cross have a strange background for flowering in time for Christmas. The seed parent was Gloriosus and pollen was from a seedling originating from $8 \text{ Y-Y} \times N$. poeticus Ornatus. They have creamy white, fairly broad perianths; two have bright orange coronas with sixteen to twenty-two florets and their sibling has a yellow corona with up to twenty-three florets on a stem.

My favorite in this Christmas bunch of whites comes from Avalanche × Autumn Sol. It is a very substantial flower with florets almost 5 cm in diameter (Soleil d'Or is about 4 cm). It has a smooth, broad, rounded, overlapping, circular perianth which is cream rather than white. The corona is a clear citron yellow with a tinge of orange in the eye. There are

usually eleven to twelve florets on a stem. If this flowered at the time of daffodil shows it would surely win a prize!

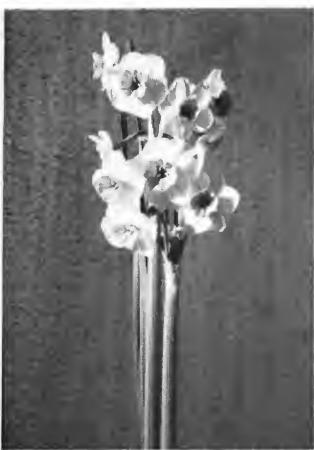
The third and totally different series are poetaz seedlings bred from Matador, a spring flowering cultivar. A few of these are early enough for our Christmas bouquet. They usually have six to eight florets, which are fairly large with broad, rounded perianths of varying shades of clear yellow. The coronas are bright orange, one is orange-red. It only needs four or five stems to make a showy vase of these. The early flowering has been inherited from our autumn flowering yellow seedlings bred from Autumn Sol, French Sol and Newton.

For the fortunate people with a climate mild enough to grow these tazettas, there are many advantages, particularly as cut flowers. They can be picked when the first one or two florets are open and all the buds will open in water. Dead florets can be removed as necessary. I usually put them in a cool room at night which prolongs their life.

Out of doors in our climate we have a succession of flowers on individual clones which could take four or five weeks from first to last flower, depending on the temperature, whereas the flowering period of trumpets and cups in the spring would be seven to ten days.

As I write this in mid-January, the tazetta seedlings are tucked up under their glass frames for protection against the severe frost and snow which might damage them. We shall have to wait until the temperature rises for the next batch to flower.





Left: Avalanche \times Autumn Sol; right: Matador \times (Newton \times N. t. aureus).

BEGINNER'S CORNER

FRANCES ARMSTRONG, Covington, Virginia

Are your daffodils too crowded? Even if you grow them as a landscape plant only, the time comes when they must be dug and thinned. And if you want to exhibit your daffodils in shows, division every two to four years is necessary in most climates.

Dig the bulbs as the foliage begins to fade and before it disappears. Handle the bulbs carefully, keeping the various cultivars separated and labeled, and out of direct sunlight. I prefer to dig no more in a day than I can clean, put in mesh bags, and perhaps dip in a fungicide such as benomyl or Formalin.

Have you been losing some of your bulbs in the ground? Chances are the cause is either basal rot or the larva of the narcissus bulb fly. Basal rot accompanies high soil temperatures and poor drainage. Dig your daffodil beds deeply, add humus, and sand if your soil is clay, until the beds are elevated four to six inches after settling and your problem with basal rot hopefully will go away. Planting in a new location is helpful. Even so, if your climate is hot and humid, a fungicide dip may be in order.

Benomyl, sometimes sold as Benlate, is easily obtained wherever garden supplies are sold and is the choice fungicide for *Fusarium oxysporum* f. narcissi. Formalin, a 10% solution of formaldehyde, is an

alternate dip obtainable through pharmacies.

Benomyl is used at the rate of 3 tablespoons per gallon of water. The solution should be maintained at a temperature of 77°-110° F. I check this with an old candy thermometer. A soak of at least thirty minutes is recommended; a longer one is better and a stronger one will do no harm. A 0.5% Formalin soak for ten to fifteen minutes is sufficient. Soaking is best done within forty-eight hours of digging and the solution should be discarded at the end of each day. (Pour the benomyl solution over peonies or iris.) After the soak is completed, hang the bags of bulbs outside in shade until they are COMPLETELY dry. (See T. Snazelle, *The Journal*, Vol. 16, #1, Sept. 1979, pps. 35-43.)

As for the bulb fly, inspect each bulb very carefully. If there is a hole in or near the basal plate or if the bulb is soft, cutting into it may reveal the larva of the bulb fly. Unless it is a very expensive or rare cultivar, destroy the bulb. If you want to try to save it, dig the larva out and soak as above in a strong solution of benomyl three hours or more. For fly control use a soil drench of trichlorfon (Dylox R or Proxol 80SP) or chlorpyrifos (Dursban) at the base of narcissus foliage during the time of fly activity which is one to three weeks after the end of the blooming season.

In the deep South the consensus of growers seems to be that bulbs are better replanted promptly, as storage under hot, humid conditions is not well tolerated. In milder and colder climates the preference is for summer storage in well ventilated and not too warm areas. Some use air conditioned rooms, others garages, tool sheds, and basements with outside ventilation or dehumidifiers. Do not place too many bulbs in one

bag as they may heat up in the middle.

The leisurely (?) days of summer are fine ones to prepare beds for fall planting. While you are digging, add some superphosate down deep where the daffodil roots will penetrate as phosphate works through the soil very slowly if at all. Potash may be dug in shallowly or used as a top dressing. Do not use fresh mainure as it encourages basal rot. Let the bed settle for several weeks or until planting time which is as soon as the soil cools to 54° F. (12°C.).

Those daffodil growers who garden in regions of sparse rainfall should prepare their beds differently, perhaps planting the bulbs in trenches to catch all the moisture available. Giving cultural advice in a country as vast as ours with all the climatic variation, not to mention that of our overseas members, is an impossible task. Temper these directions here with those of your gardening friends and your county extension agent.

Many thanks to Peter Ramsay for his very helpful and timely column in the last *Journal*. Are there any volunteers for future "Beginner's

Corners?" Don't be shy!



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SOME THOUGHTS AND THEORIES ON SEEDS AND SEEDLINGS

GEORGE TARRY, South Wirral, England

(from The Daffodil Society [Britain] Journal, February, 1985)

After growing named cultivars raised by others for many seasons, it is quite usual for some of our members to seize the opportunity to exercise their creative instincts and start raising seedlings and to display them at our shows. Newer growers often give the impression that an exhibitor showing a seedling under number has an advantage, but if they visit the plantings of any raiser, large or small, they will soon realize that an area planted to named cultivars will produce many more show flowers than the same area devoted to seedlings.

Nevertheless more and more members are exploring this fascinating side to our hobby and finding that the procedure for obtaining seed is quite simple. To produce seed, a daffodil bloom must be fertilized by pollen introduced to its stigma. For those who are not familiar with botanical terms, the stigma is at the center of the trumpet or cup and is surrounded by six anthers which are covered with pollen, a dusty powder which is usually yellow but may be whitish or pale grey. The pollen is ready as soon as the anthers burst to make it available, which may be shortly after the petals expand, but in cold conditions may be delayed for a day or so, and it remains in good condition for the whole life of the flower and even beyond. Pollen may be taken from a flower, enclosed in tissue paper and sent to Australia and New Zealand where it can be used successfully, if stored in dry conditions, when flowers open there five or six months later, although the seed crop will usually be less than with fresh pollen. Similarly, pollen may be sent and used in the reverse direction.

There are several ways of transferring pollen to the stigma. Those with scientific training usually recommend a small, soft, artist's brush; and while this is probably the best method when pollen has been removed from a flower which will be used at a show, it is unnecessarily slow and tedious if any quantity of flowers are to be treated in the open beds as the brush must be cleaned thoroughly and sterilized after each operation. By far the most popular method is the use of tweezers to remove a complete anther from a bloom and to apply it directly to the tip of the stigma. The stigma will be ready to accept pollen a day or two after the pollen on the same bloom is seen to be ready and will remain in condition for about a week in average conditions. As soon as a bloom shows the first sign of passing from complete freshness, the prospects of using it to obtain seed diminishes rapidly. When in good condition, the tip of the stigma will retain an obvious heavy coating of pollen, and with care it is possible to use one anther to pollinate five, six, or even more flowers.

Another method popular with some raisers is to use the tip of a penknife blade, or a similar implement. If pollen is particularly short, this will ensure that the maximum number of flowers will be pollinated. This is also valuable when pollen has been stored, or is taken from dead flowers, as the anthers will then be very dry and brittle and will disintegrate when gripped firmly with tweezers. The pollen should be scraped on to a smooth surface from which a small quantity can be picked up with the point of the blade and applied to the stigma. It is essential to wait for a still, windless day otherwise the wind will scatter far more pollen than you will use.

On a dry, sunny afternoon, the tip of the stigma may become too dry to retain the pollen and to overcome this the scientists recommend the use of various solutions. The experienced hybridist has his own solution which is readily available to all—a lick of spit. Just lick the end of a finger, apply the finger to the end of the stigma, and the pollen will then adhere as though

the bloom is in prime condition.

One point on which beginners may be confused is whether the seed parents should have the anthers removed before pollination. Our scientific types recommend that forceps should be used on developing flowers to remove the anthers before the petals open. This may be sound in theory when working in a research laboratory or glasshouse and carrying out a pre-planned program, but has no relevance in an amateur's circumstances when the requirements of blooms for show must go hand in hand with the production of seed. Very few amateurs carry through a planned program but work primarily with the best material available when they have the opportunity and conditions to hybridize successfully.

From observations made from time to time in my own beds, I am satisfied that there is no need to remove the anthers from most of our blooms before pollination. If we make a close examination of most trumpet and long-cupped types, we find that they are not designed for self pollination as the anthers are situated behind the top of the stigma, so the pollen is most unlikely to arrive at the tip of the stigma without the aid of an outside agency. If we watch the bees and larger flies on a sunny day we will note that they will land on the top of the corona, and then crawl steadily into the corona towards the center of the flower to obtain nectar (or whatever they may be seeking), then they withdraw to the lip of the corona again with the upper part of the back covered with pollen. They take off, make a short reconnaisance flight, no doubt losing part of their load of pollen on the way, and land on another flower of a similar color to the one that they have left. This cycle will be repeated until either the observer tires of watching, or the insect moves off beyond the range of observation. There is little doubt that pollination by insects occurs when they enter the flower and thereby transfer pollen from one bloom to another, and on many blooms they can enter and leave without touching the stigma. This is confirmed by my own records which show that less than 1% of blooms are open pollinated, i.e. produce seed without any action on my part. If other growers find that their risk rate is much higher than that, they must then take elaborate precautions to exclude insects from their blooms. To de-anther when pollinating a bloom that has been open several days serves no useful purpose. If it has already been visited by an insect nothing can be done (or undone) to offset any open pollination. The amount of pollen placed on the stigma by manual pollination will be so great that any subsequent addition by an insect is most unlikely to be productive.

With short cupped flowers the position may be different as the anthers may be very close to the top of the stigma and it may be necessary to remove one or more anthers to prevent mixing pollens. My own records show that the incidence of open pollination of this type of bloom is very low indeed, possibly because the larger insects find that they make poor operating platforms for their activities.

No doubt many amateur hybridists will disagree with my observations, but they may wish to note that the leading raiser of the last two decades, the late John Lea, went even further in the case for not removing anthers as he had evidence that removal had an adverse effect on seed production.

Having looked at the mechanics of pollination, we now consider the choice of cultivars most likely to produce the results we seek. The standard advice for all plant breeding is, broadly speaking

1. Start with known reliable parents

2. Cross cultivars with complementary characteristics

3. Continue to use reliable parents but at the same time allocate part of

the program to a search for even better parents.

If we look at the catalogues of most of the specialist suppliers, we find that the parentage is given in the form White Star (Rashee × Empress of Ireland). In Britain it is standard practice to put the seed parent first so that White Star came from Empress of Ireland pollen onto Rashee. Almost every grower will find that he already has several cultivars which feature regularly in these lists, and that more can be acquired for a modest outlay. It is tempting to start by copying the cross that has been successful in the production of recent novelties, but as these are the result of crosses made twenty years or more ago, we may be able to find something even better to use as at least one parent, especially with a planned approach.

To achieve this objective we must look at the characteristics of a first class flower which may be summarized as -

1. A high proportion of usable blooms

2. Good form—a flat perianth with good overlap and a round corona in good proportion

Adequate substance so that the flower remains in good condition for several days

4. Good clear color on opening and retained throughout the life of the bloom

5. A stem which is long enough and strong enough to carry the bloom with good poise

If we give points for each of the above headings to the range of cultivars at our disposal we find that they all have strengths and weaknesses. The

planned approach is to cross cultivars so that the stronger characteristics of one parent may offset the weakness of the other. At one time it was suggested that certain characteristics were transmitted from the seed parent and others from the pollen parent, but intercrossing over the years has reached the stage where there is little evidence to support any definite trend of this nature. Inevitably when crossing any two flowers part of the progeny will combine the weakest points of both sides, but these will be such obvious rubbish that they will be discarded without a second glance, especially if one or two of the same crop combine the best of both parents and show a definite advance towards the goal.

The development of any plant is a long term project and success may not come in one generation. Try to remember why you made each cross and look for progress in that direction. A "near-miss" seedling which may not be good enough to name may still prove a better parent than a named

cultivar and be most valuable in a breeding program.

For all practical purposes, seed can only be obtained from growing bulbs, but pollen is available from cut flowers and most leading growers will make good blooms available, especially if approached in the friendly social atmosphere when the show is open. Make a short list of the types you require and restrict your request to a modest quota that you can use to good effect, and never try to open a discussion on this subject when an exhibitor is busy staging flowers.

Before we get too far in our operations, we must give some thought to the records which are essential for quick, easy, and ordered reference as the seasons go by. There are two main systems which may be varied to suit individual aims and ideas. The first system retains the same numbering from the application of the pollen right through to the trial of selected seedlings until they are named or discarded. The alternative uses a similar system up to selection for further trial, and then changes over to a

separate record.

The first essential in the basic record is a symbol for the year which is most commonly in the form of two numbers, 83, 84, 85, etc., and then a series of numbers for the crosses made, 1,2,3,4, and so on. For a comprehensive record, each cross is noted against the next vacant number as it is made, together with the number of blooms pollinated and later the number of seed pods harvested, and the total crop of seeds is added. The main benefit of the comprehensive record is in planning future operations as it will give some idea of the value of each cultivar for seed production. If your total capacity is, say, 200-250 seeds a year, there is no point in pollinating a whole row of flowers likely to produce a crop of 20-25 seeds each, but with known shy seeders there will be a requirement to pollinate every available bloom.

The main weakness of recording crosses serially as they are made day by day is that the divisions and color combinations all appear at random and it will be necessary to check the complete records for many years if you do not wish to repeat crosses that have already been made. It is therefore more convenient to maintain the day to day record but to defer numbering until all the crop is harvested when it can be rearranged in division and color combination groups 1 Y-Y, 1 W-Y, 1 W-W etc. Whichever line is adopted, the seeds will be identified by the number allocated at this time, 1/84, 2/84, 3/84 and eventually when selections are made at flowering time a further number is given so that the first selection of 3/84 is 1/3/84. Some raisers reverse this order and/or use a mixture of numbers and letters so that 84/3/A has the same meaning as 1/3/84.

The alternative system goes on the same lines until the flowering seedlings are selected for further trial when they are transferred to a new record. This method was used by Richardsons with the first selection of all starting at R1, with every further selection given the next available number until R1000 was reached when they started at R1 again. Many others have used, and continue to use, this system, although it does scatter sister seedlings throughout the planting and necessitate frequent reference to records during the flowering season to confirm pedigrees. Every grower has his own ideas on what is required and devises a record which meets his own needs.

To revert again to our pollinated flowers, it is essential that they are marked to match up with records, and supported to reduce the possibility of loss or damage to a minimum. The traditional label was the small card price tag used by drapers, but this has been largely superceded by the plastic label as used for the naming of plants in garden centers. A thin bamboo cane makes an ideal support, but remember that the stem will continue to grow for some weeks and the 3-foot length will be required by harvest time. Allow for the growth of stem, as if it is tied too tightly, the stem may crack, the flow of sap will be arrested, and part of the crop lost. If the stems are not supported, some will go down with the ripening foliage in June and the maturing seed pods overlooked.

The first sign of a successful cross is the early fading of the bloom followed by an obvious swelling of the seed pod. Development will continue but there may well be a late collapse of some seed pods during June. The survivors will begin to ripen as the foliage yellows and they will need regular inspection from then on, twice a day in hot sunny weather. By this time the seeds can often be heard to rattle in the pods when shaken and there is a strong temptation to harvest at once, but it is safer to wait until the pod begins to split as not all the seeds will ripen at once. Collect the seed in small envelopes each bearing details of the cross and its number and make arrangements to sow it early, by the beginning of September at the latest. After that date, some of the crop goes dormant and will not germinate for twelve months.

The traditional container for daffodil seeds was a wooden box about six or seven inches deep with each seed allowed about one square inch or a little more. Such boxes have not been used for packing goods for many years and the price of timber is prohibitive so an alternative is essential. On a small scale, standard plant pots are suitable but rather wasteful of space. On a larger scale a suitable container can be made from 5-litre and $2\frac{1}{2}$ -litre plastic containers which are now used for a wide range of liquids

from motor oil to washing up liquids. By perforating the base and cutting off the top at the shoulder we have a container for 25-40 seeds which can

be packed together closely.

The choice of compost is not critical; all popular mixtures have been used with equal success. Although in the wild all seeds germinate on the surface of the soil, it is safer to sow with about one inch of cover as this provides a more even condition of temperature and moisture and eliminates most of the possible losses from the depradations of birds and small animals. Germination occurs in a few weeks but nothing appears above ground for some time. From the seed the shoot grows downwards into the soil for some distance, then divides into two, one part continuing its downward path and the other turning back upwards to emerge eventually from the surface of the soil. Growth above soil begins to show from December onwards and will continue for many weeks, but only one thin round shoot will appear in the first season. An embryo bulb will form in the soil at the point where the initial shoot divides.

Almost every raiser reports a germination rate of about 70% which is broadly in line with most other seeds. This varies from cross to cross and ranges from 0%, usually restricted to a shy seeder with poor quality seed, to 110%, achieved by a free seeder where one or more of the poor, thin seeds, which were not recorded but were sown as "no-hopers," survive

and grow.

In sheltered situations and milder areas, the seeds will be quite safe in the open; but in colder districts it is wiser to give protection in frostfree glasshouse or cold frame from December onwards, as the initial growth may be destroyed in its early stages by severe frost. The protection will also ensure steady development and give a better embryo bulb at the end of the first season. No special attention is required other than an occasional application of water. The surface of the compost may become covered with moss but this will prevent the germination of weed seeds which proliferate in most gardens. By March/April, protected accommodation is at a premium and the containers may be removed to a sheltered area outside where the growth is safe from damage from strong winds.

By June the single shoot will begin to yellow and wither and nothing further is required for some months except to water in dry weather. The original compost will contain little nourishment for a second season, so the top layer, down to the embryo bulbs can be removed with the aid of a label and replaced with fresh compost which contains a double dose of fertilizer to compensate for the deficiency in the layer below the bulbs. This can best be carried out in December as an odd dormant seed may germinate in the second season and be lost if the spent compost is removed too soon.

Growth will now continue with one, two, or three flat leaves per bulb. In colder areas, protection will be beneficial for the worst period of winter, as will a weak feed of high potash liquid fertilizer in all areas in late April and late May. Foliage will mature during June, when the containers may be emptied and the young bulbs harvested. They will vary from cross to cross and from season to season, but should be rather thicker than a

pencil and about half-an-inch long. These bulblets should be planted without delay in a prepared bed and can be set out with a dibber about three inches deep, four inches apart with eight inches between the rows. As they will remain in this bed for four seasons it is essential that the soil should be well prepared over the previous two or three seasons when other crops can be grown. Occasionally a few flowers appear in the first season in the open ground, 24-30% in the next season, and the majority when the bulbs are five years old. Selections must be marked each year as after the first flower the young bulb may divide and miss a season; if not marked early it will be lost.

In the early years of growing seedlings, first selections will be too generous; but with more experience about 10% will be chosen for growing on. Some of these will improve steadily and show their true worth when they are eight to ten years old. At all times when making your selections, remember why you made each cross and look for progress towards that goal. Many of our best cultivars came from seedlings that were not quite good enough to name.

The foregoing advice applies equally to cultivars in Divisions 1-4, 6 and 9, but most named cultivars in Divisions 5, 7, and 8 are sterile and will produce neither seed nor viable pollen. Where cultivars are fertile, this

is normally stated in the specialist catalogues.

Finally, before pollinating every flower in sight next spring, sit down and calculate how much space will be required for every 100 seeds sown in the year. For the first two seasons they will be in containers. Then at 70% germination they will need 16 square feet for four seasons, with the same area added each year for each further sowing. With the average blend of luck and skill, you will probably be able to put half dozen creditable seedling blooms on the bench in the sixth year, from an area which would, by then, accommodate 150 bulbs. If you treasure prize cards and medals, stick to the named cultivars, but I doubt if you will ever get the same kick that will come when one of your seedlings receives its first award.

MARY ELIZABETH BLUE

Mary Elizabeth Blue of Chillicothe, Ohio, died in early April at age 79. She was the founder of both the Central Ohio and Adena Daffodil Societies and served on the ADS Board of Directors during the 1970s. She was an accredited judge of daffodils but requested the AJR designation in later years. She was a charter member of the ADS and one of its life members.

BULLETIN BOARD

FROM THE PRESIDENT'S DESK

After a very severe winter in most of the country, spring finally arrived in all its daffodil glory. How delightful it is to see those first buds open!

While the snow was piled high in banks against the greenhouse, inside a few tazetta daffodils were opening each day in all their splendor. In mid-winter there is nothing more prized by the daffodil fancier than the

sight and smell of sweet-scented tazettas.

Late last summer and fall I potted up 75 pots of bulbs. Pots of Grand Primo and some others were already showing growth when I arrived home from down under, although they were stored under the benches of a cold house. They were watered thoroughly and when shoots were about two inches tall were brought to the light. *N. pachybolbus* was the first to bloom showing its fragrant tiny white flowers, and on Thanksgiving Day Soleil d'Or opened its beautiful yellow blooms with bright orange cups. What a pleasing aroma!

The daffodil house is a small Orlyt glass house, and the temperature is kept just above freezing at night, about 40 degrees. On sunny days the roof vent may open and allow fresh air to circulate. An electric fan runs

constantly.

One morning, after a 22 degree below zero night, a crust of frozen soil appeared on some of the pots not yet ready to bring to the light. No damage was done. In a controlled temperature *N. pachybolbus* threw scapes over a period of ten weeks. It is surprising how long scapes will stay fresh in a cool, moist environment. The floor of the house is covered with pea gravel which is kept moist at all times. A small hot water radiator supplies heat when needed.

The pots are watered with a mild liquid fertilizer, and when through blooming are set out of doors in the sun when frost is over. They are kept growing as long as possible. The pots are not disturbed until August when the bulbs are repotted in fresh Metro-Media mix for the next growing

season.

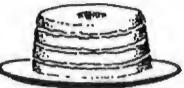
A few days after Christmas I potted up a few stray bulbs, the last of the season, and placed them under the bench for late spring blooms. This is an experiment to see how well they will do when the weather becomes warm.

In Holland experimentation is being done on the tazettas. The bulbs are held out of the ground until February, then planted for May and June bloom for the cut flower market. It will be interesting to see how well this method of culture works, since many of the tazettas are naturally early bloomers and will sprout and start growth out of soil and without water when the conditions are to their liking. It seems a way will have to be found to delay that early growth. Perhaps some day we can have daffodils twelve months of the year if we learn how to manage the growth factor.

-HELEN K. LINK

Daffodil Torte





1 package white angel food cake mix

Yellow food coloring

1 pint dairy sour cream

1/2 cup finely chopped almonds, toasted

3/4 cup apricot preserves Confectioners' sugar

Preheat oven to 350°. Prepare angel food cake mix, following label directions; spoon half the batter into a second bowl; tint pale yellow with food coloring. Spoon batters, alternating white and yellow, into an ungreased 10-inch angel food cake pan to make a layer, Repeat with remaining batters, alternating colors to make a second layer. (Do not stir batters in pan.) Bake in preheated oven at 350° for 40 minutes, or until golden. Invert pan, placing tube over a soda pop bottle; cool cake completely, Loosen around edge and tube with a knife. Turn out onto a wire rack. Split into 4 even layers with electric knife, Mix sour cream with almonds in a small bowl. Place largest cake layer on a serving plate; spread with one third of the cream-nut mixture, then 4 cup of the apricot preserves, Repeat with remaining layers and fillings, stacking cake back into shape. Sprinkle confectioners' sugar over top. Chill several hours, or overnight, Slice into wedges with an electric knife, Serves 12.

Daffodil Sponge Cake

1 cup egg whites

1 teaspoon cream of tartar

½ teaspoon salt

1 teaspoon vanilla extract

1 cup sugar

1 cup sifted cake flour

4 egg yolks

Grated rind of ½ orange

Beat egg whites until frothy. Add cream of tartar, salt, and vanilla. Beat until whites begin to hold their shape. Gradually add sugar and beat until very stiff and glossy. Fold in flour gradually. Beat egg yolks until thick and lemon-colored. Divide batter and fold egg yolks and rind into one-half. Put by tablespoons into ungreased 9- or 10-inch tube pan, alternating yellow and white mixtures. Preheat oven to 300° F. Place cake in oven and bake for about one hour. Invert on rack to cool. Remove from pan. Frost with butter frosting.

DAFFODIL PIE

4 medium eggs, separated

6 tablespoons sugar

1/4 teaspoon salt

1/4 cup lemon juice

(seeded but unstrained)

1/2 cup boiling water

4 tablespoons lemon

flavored gelatine

1 tablespoon grated lemon rind

1/4 teaspoon cream of tartar

6 tablespoons sugar

Whipped cream

1 cup well drained

mandarin oranges

8 inch pie shell

Mix egg yolks, sugar, salt and lemon juice in a saucepan. Cook over very low heat or use a double boiler. Stir constantly until mixture thickens and coats a metal spoon. Remove from heat and set aside. Stir boiling water into gelatine to completely dissolve. Now with a rotary or electric beater, beat the thickened lemon mixture into gelatine. Add rind. Make a meringue of the egg whites, cream of tartar and remaining 6 tablespoons sugar. Carefully fold the egg-gelatine mixture into meringue. Pile filling into cooled pie shell and refrigerate. Serve with whipped cream and garnish with mandarin orange sections. Six generous servings.

Y-WY DAFFODIL DELITE

1 Stick Oleo (soft)

1 Cup Flour

¹₂ Cup Chopped Nuts mix together for bottom crust. Press into bottom of 9×9 cake pan. Bake 20 minutes at 375°F. Let cool.

8 oz. Soft Philadelphia Cream Cheese

1 Cup Powdered Sugar beat until fluffy. Fold in ½ Medium-sized Cool Whip and put on crust as one layer.

As next layer; put on one can of "Thank You" brand Lemon Pie/Pudding Filling. Top with the rest of the Cool Whip.

Chill.

(Note: Can be made day before and will keep refrigerated several days.)

Next time you're wondering what to serve your daffodil (or other group), try one of the above recipes, all of which came from local society newsletters.

CORRECTION

The December Journal reported that Carncairn Daffodils had received a Silver Medal at the Liverpool International Garden Festival in 1984, whereas it was in fact a Gold Medal. Our congratulations to Kate and Robin Reade. The editor regrets the error.

DAFFODILS 1984-85

The RHS publication, Daffodils 1984-85, has at long last been received by the Executive Director who has mailed copies to those who ordered in advance. If you'd like a copy, please send \$5.00 to our Executive Director, Leslie Anderson, who promises to send your copy by return mail!

Memorial Contributions

John Lea	Delia Bankhead
Phil Phillips	Delia Bankhead
Mary Elizabeth Blue	Mary Lou Gripshover

FREEMAN A. WEISS

Freeman A. Weiss, one of the founders of both WDS and ADS, and the first president of WDS, died January 27 at the age of 92. Dr. Weiss was a plant pathologist in the Department of Agriculture before his retirement in 1950, at which time he became curator of the American Type Culture Collection, "a repository of microorganisms and information relating to them" which served researchers worldwide. He was also a charter member and past president of the Potomac Rose Society, and was coauthor of the Azalea Handbook of the American Horticultural Society.

From 1950 to 1960 Dr. Weiss served both WDS and ADS in various capacities. His contributions on various phases of daffodil growing and enjoyment appeared frequently in daffodil society and other horticultural publications.

After 1960 Dr. Weiss divided his time between Charleston, South Carolina, and his farm in Minnesota. In South Carolina he influenced the planting of daffodils in Magnolia Gardens, and in Minnesota he promoted daffodil growing through the ADS North Central Test Garden at The Minnesota Landscape Arboretum.

ACCLIMATING BULBS

GERARD KNEHANS, Ownesville, Missouri

There have been several excellent articles on acclimatization in past issues of *The Daffodil Journal* in which various methods were detailed. After reading these, I finally gathered enough confidence to formulate a method suitable to my situation and try my hand at coaxing bulbs from Australia and New Zealand to get in tune with Northern Hemisphere seasons. The short term results have been very good and some Society members who may have had problems in the past may want to try to duplicate this in their gardens.

Back in the spring of 1983, I received five bulbs from an Australian grower. All five were treated with a bulb dust and planted in a border on the north side of my house. This site is at the base of the foundation to a heated basement. The combination of shade and basement wall keeps the ground as cool as possible in the summer and the heated basement moderates soil temperature in the winter. And, while the site is primarily shady, there is enough sunlight in the early morning and late evening when the daffodils are ripening to produce blooms for the following season.

The effect of this location, I believe, is to make the planting site as "season-neutral" as possible to help the bulbs adjust more readily to Northern Hemisphere seasons. Of the five bulbs planted late in February, 1983, four cultivars bloomed superbly this spring—Attica, Goola, Kindee, and Ultima. One of the bulbs—Attica—even bloomed last spring.

Only two of the five—Goola and Kindee—displayed any above ground growth the first summer. Both, however, began vigorous growth in late September and October and were mulched to prevent damage to the leaves. They resumed their growth last spring and the three other cultivars also displayed normal growth without any sign of stress or other problem.

Then, last spring, I planted seventeen bulbs from Australia and New Zealand in the same manner and in the same border. All but one showed top growth by summer and most began vigorous growth in the fall. Some were mulched, others were not. All appear to have made it through a rough winter without any problems, except one—Koromo—which is not doing very well at this point. The one cultivar not showing top growth last summer or fall—Dear Me—is up and growing nicely.

At this point, I might tell you that one of the 1984-planted bulbs, Jackson's 195/75, bloomed last summer. Another variety—Ra—displayed one very nice bloom this spring.

So far, the process I'm using seems to be doing quite well in acclimating down under bulbs. The weather, I believe, has been an important factor as well. Both the springs of 1983 and 1984 were much cooler than normal here. This helped the bulbs establish good roots for their growth cycle. In contrast, this spring has been much warmer than normal and I look with interest for the results of those down under bulbs planted this spring.

POETS - ENGLEHEART'S LEGACY TO HYBRIDIZERS

MEG YERGER, Princess Anne, Maryland

Fifty years ago the Reverend George Herbert Engleheart saw his daffodils for the last time. He died early in 1936. Now, half a century later, his poeticus cultivars are living on in the genes of poets being bred by hybridizers of today as well as in the many other types of daffodils that were created by crossing his poets with flowers from other divisions.

One of the last poets he himself registered was Ace of Diamonds in 1923. It was a tall flower of superb quality with a bloom that was not very large and with an almost entirely orange eye encircled by a thin red rim. The pollen tended to transmit that color when used in breeding as evidenced in Smyrna (James Hogg × Ace of Diamonds) raised by the Scottish Brodie of Brodie and registered by him in 1927. From the registration dates it is obvious that the Brodie must have had access to the pollen while Ace of Diamonds was still under number. Considering the length of time it takes a poet to bloom from seed and be evaluated it is probable that he made the cross by 1914 when he went off to serve in World War I. By the same token, Ace of Diamonds might have been around as a seedling for a few years before that. At any rate, there are indications that there was a large supply available by 1923 when Engleheart decided to part with his entire stock of bulbs. He lost so many plants from eelworm and bulb fly that he got rid of most of those left, continuing only to raise a few seedlings for his own fun.

Soon Ace of Diamonds appeared in trade exhibits of Donard Nurseries of Ireland with fine examples of it winning many first prizes. In a 1927 show report of the Midlands Daffodil Society it was referred to as the best red-eyed poet yet shown; it was not a large flower but was of





Left: Ace of Diamonds; right: Rev. George Engleheart (from the RHS Daffodil Yearbook 1933)

superlative quality with lustrous white perianth of perfect form and a brilliant orange-scarlet eye; yery tall. Some of the stock was also in the hands of tradesman F.A. Secrett who acquired most of Engleheart's poet cultivars and seedlings which he named and introduced for him. These included Foresail, Huon, Ian Secrett, Mandarin, Narrabri, Papyrus, Red Rim, Sea-green, and Widewing. Mr. Secrett was particularly interested in bulbs for the cut flower trade and predicted a great future for these poets. By 1923, when Ace of Diamonds was registered, the prominent poetraiser A.M. Wilson of Presteigne already had a dense crop of Ace of Diamonds flowers. There seems to be no doubt it had been around a long time under number! Once available it didn't take Guy Wilson long to use its pollen on Dactyl to create Sidelight, Thomas Hardy, and an almost-Royal-Flush, including with Ace of Diamonds his own King of Diamonds. Queen of Diamonds, and Knave of Diamonds. From the same cross Brodie raised Tannahill. Edwin Powell bred Catawba by using Ace of Diamonds pollen on Minuet.

Sixty years from time of registration, hybridizers of poeticus cultivars still rely on Ace of Diamonds through its progeny. Were it not for Smyrna there would not be the whole beautiful D-94 series from Mitsch—Angel Eyes, Bonbon, Bright Angel, Emerald, Suspense, and Tart. Nor would we have Tom Bloomer's Poet's Way and Poet's Wings. Helen Link's Phebe would not exist without Sidelight, nor her Sheilah without Tannahill and Thomas Hardy.

Another poet registered at the same time as Ace of Diamonds was the late-blooming, beautiful Dactyl. Guy Wilson was almost lyrical in describing it as such a perfect flower he couldn't imagine any improvement. It was a large flower of flawless symmetry and great substance with the perianth snow-white. The perfectly proportioned darkly rimmed eye had a good deal of green toward the center. It proved to be at least the equal of Ace of Diamonds in producing outstanding descendants appearing as it does in the ancestry of poets such as Avoca, Cantabile, Heart's Desire [Bisdee], Hexameter, Lacquer, Lights Out, Shanach, Tannahill, and their descendants. From just these two cultivars, registered fifty years ago, comes the material with which to work in producing poets of the future—a gift of great magnitude to today's hybridizer.

It was a little more than a hundred years ago that Engleheart began to raise daffodils, in the early 1880s, when he was thirty-one years old and Vicar of Chute Forest. That could be called the Appleshaw period because at the time he lived at Appleshaw Rectory, Andover. He knew of the experiments in cross-fertilization of daffodils by his relative William Herbert, Dean of Manchester Cathedral, who proved that many kinds of daffodils listed as species were actually natural hybrids. Dean Herbert wrote encouraging the humblest of gardeners or even flat-dwellers with an extra windowsill to try cross-fertilization. His particular interest in the species suggested a line of approach to Engleheart who began his own work by reproducing natural hybrids and garden hybrids from the species as Herbert had done. From that he progressed into all divisions,

particularly the poeticus. He agreed with Herbert's predictions for the many variations that could result from cross-breeding poeticus because so many of his own seedlings turned out to be distinctive in form and color from existing varieties.

In using the species poeticus then called *N*. poeticus verus of Linnaeus—now known as *N*. poeticus hellenicus—he found it rarely set seed unless pollinated by hand. He also found that every bloom receiving pollen from either *N*. p. Ornatus or *N*. p. poetarum would develop a pod. Hellenicus had died out for him before 1914; however its genes may be part of the heredity of some of his earlier poets which show characteristics of lateness, or of tallness relative to size of a very round small bloom.

The most successful early crosses involved N.p. Ornatus $\times N.p.$ radiiflorus poetarum, generally producing blooms with a suffusion of orange and red in the corona such as Dante, Herrick, Horace, Homer, and Virgil. Poetarum has a poor perianth with gappy segments but is the source of intense color and is early. Probably later crosses were made with pollen from its offspring to retain the color with hope for better form.

N. p. recurvus with its powerful scent is recorded as pollen parent in the cross that produced Petrarch # before 1896 and Spenser before 1901. N. p. patellaris, a late species with a large flattened eye, was also available but there seem to be no poets existing today with it as parent. Praecox, which is probably a natural hybrid instead of a species, was available and was used in crosses with other types of daffodil but there is evidence that it was never used in the breeding of poets until very recently.

In 1894, Engleheart described his series of experiments in hybridization in a paper read before The Royal Horticultural Society. He had succeeded in making exact duplications of the blooms resulting from William Herbert's own experiments on species crosses. He commented that from the great number of seedlings he had raised he was certain that on the whole the male is potent in determining form and color of the hybrid and that this is most marked in regard to color.

Soon after that conference Lady Ellen W. Willmott of Warley Place became a member of a syndicate which bought much of the Engleheart stock, many of which were named by her. Several of them won RHS First Class Certificates or Awards of Merit. P.D. Williams bought his first bulb of Horace from Engleheart in 1897. In that same year the first shipments of Engleheart bulbs went to Australia to Alister Clark of Victoria and to Sir Robert Heaton Rhodes of New Zealand. The poet Dante was in those shipments. It ultimately came into the stocks of Heathcote Bulb Nursery in Victoria, Australia, where Travers Morrison described it as a lovely cultivar, with broad, solid white perianth; cup citron, conspicuously edged rich madder red. At the present time a large naturalized planting exists in a private garden in Leongatha, Victoria, where the owner says it is surrounded by its own seedlings. It seems possible that it could become as great an influence in the development of modern poets as Ace of Diamonds has been.

The meeting of the Midland Daffodil Society after its first Annual Exhibition in 1899 at Birmingham, England, included a conference presided over by Mr. Engleheart, a member of the committee. There was a continuous rain from morning to evening which didn't dampen the enthusiasm of growers who came from all parts of the kingdom to discuss a variety of subjects, one of which was whether to have a separate class for the Poeticus Section. At that time poeticus were included in classes for Parvi-Coronati Daffodils which were saucer or flat crowned. Positive action was taken on the matter and later show schedules included classes for "True Poeticus."

Great features of the shows came to be the choice collections of Engleheart seedlings admired by all visitors. He was an artist at staging his trade exhibits but was as likely as not to tear down the exhibit at the end of the first day thus leaving the show with a blank space for the public to look at the second day. Of course he had very high standards of perfection and it might be he was not pleased with the exhibit or the amount of business it produced. His temperament seems to have been forgiven because the exhibits were always a great feature of the shows as long as he was able to continue with them.

Fellow trade exhibitors and principal growers in the early days included Messrs. Pope & Sons, Kings Norton; E.M. Crosfield, Wrexham; Miss Fanny Currey of Lismore, Ireland; Pearson and Sons of Lowdham; Messrs. M. Van Waveren & Sons of Holland; as well as Miss Willmott. Very likely they bought much of the stock that he wanted to clear out before a move to Dinton, Salisbury, in 1902.

In 1903 his Cassandra, Dante, Homer, and Laureate were entered in competitive classes at the Midland's Show. The lovely forms and colors of his seedlings were a center of attraction during the whole exhibition. Again the day was cold and wet causing Engleheart to comment that it was a good thing for his flowers to have their feet in water but strictly to be avoided for his own feet. No doubt the move to Dinton gave his flowers what they wanted because he spent the rest of his life there. Soon after the move, he displayed a new race of daffodils he had created having large, flattened, disc-like crowns. Nearly all of them resulted from poeticus pollen on Princess Mary which had an extended shallow crown with accordion pleated sides which appeared flat when pressed back. The fact that he had previously persuaded the committee to provide a separate true poeticus section in shows made it possible for the new race to be shown separately. In 1904 this type was introduced into the Parvi Coronati Division which already included Poeticus and Burbidgei. As a compliment this new addition was named Englehearti. In the present day most of these are in the RHS Classification under Division 3.

Availability from the trade resulted in more Engleheart poets being exhibited by more people, including amateurs, each year. Reports on the shows list poets winning awards as follows:

1906 - Cassandra, Chaucer, Epic, Herrick, Homer, Horace, Juliet, Virgil, White Elephant

1907 - the same list, plus Barcarolle, Ben Jonson, and Laureate

1908 - the same list, plus Alton Locke

1909 - the same list, plus Rhymster

Mr. Engleheart became president of the Midland Daffodil Society in 1910. Sonata, Matthew Arnold, and Kingsley appeared along with most of the formerly exhibited poets. Kingsley won a First Class Certificate as a poeticus of great size and beauty, with broad perianth segments of great substance and a large flat eye with a very wide red band. The same year the Herbert Chapman Poeticus Trophy was offered for a group of six distinct varieties of true poeticus that had not been in commerce more than four years, including one variety not yet in commerce. It was good merchandising for Cartwright and Goodwin, Ltd. of Kidderminster to make up its entire Chapman trophy entry from some of Engleheart's newest poets—Childe Harold, Coventry Patmore, Hildegarde, Matthew Arnold, Oliver Goldsmith, and Rudyard Kipling. Other competitors included in their collections Barcarolle, Euridice, Jack Point, Kingsley, Laura, and Sarchedon.

Many of the dates of shows in which Engleheart's poets appeared differ from the registration dates in the RHS Classified List. In that list, cultivars registered since 1927 show the years of registration. For older cultivars, the date they were thought to have been first mentioned was used but was not always exact. Likewise, the Annual Reports of the Midland Daffodil Society Shows only indicate the winning flowers and there is a possibility of earlier mention of them or others somewhere else. The matter of registration of daffodil names and their classification was of great concern, so a subcommittee of the RHS was directed to work out a system of listing. Mr. Engleheart served on that subcommittee which worked out a classification system which became effective in 1910. The Parvi-Coronati Division was dropped and the Englehearti Section went into the Leedsi Division while Poeticus became a division on its own, mostly due to Engleheart's insistence that be done.

Later Midland show reports record the showing of more and more new Engleheart poets each year.

1912 - Carol, Comus, Lullaby, Musidorus

1913 - Acme, Caesar, Dulcimer, George Herbert, Lycidas, Madrigal, Minerva, Minnie Price, Orange Ring, Sidney, Snow Shoe, Stephen Phillips, White Standard

The Herbert Chapman Poeticus Trophy proved to be a real stimulus to interest in growing and exhibiting poets. A list of the most popular prize winning flowers of all divisions in the Midlands Show of 1914 was published. Among them were thirty-seven poet cultivars that had been bred by Engleheart:

1914 - Acme, Barcarolle, Ben Jonson, Black Prince, Bret Harte, Bright Eye, Cassandra, Caesar, Comus, Dante, Dulcimer, Epic, Hafiz, Herrick, Hildegarde, Homer, Horace, Iambic, Illiad, Juliet, Kingsley, Laureate, Lullaby, Madrigal, Matthew Arnold, Millie Price, Minerva, Morwenstow, Orange Ring, Ovid, Raeburn, Rhymster, Sarchedon, Sonata, Stanza, Stephen Phillips, and Symphony.

Mr. Engleheart was as popular as a speaker as his poets were with daffodil enthusiasts. The light humor of his remarks at meetings invited audience interruptions such as shouts of "Hear, hear," or laughter, or clapping of hands. One after-dinner group enjoyed his description of the hybridizer once he became famous. For himself, a great hardship was that he did not have time to enjoy the visitors to his place who came on foot at breakfast time, in carriage loads at luncheon time, and in motors at dinner time. He gladly fed them breakfast, lunch, and dinner but he himself had to go to garden to make crosses. So, brushes of pollen went into his own mouth instead of the food his guests were enjoying and he got to his flowers as expeditiously as possible.

At a meeting when the weather was especially stormy, he delighted the audience with the Shakespearean quotation "...daffodils that come before the swallow dares and take the winds of March with beauty" which he thought not true in the eyes of daffodil fanciers because that year the winds of March did not deck the daffodils with beauty but knocked them all to smithereens.

In serious discussions he urged better staging. The use of better shaped containers was a matter that he brought before the committee often. He spoke of the ones in use as being a perfect abomination. Not getting any co-operation he eventually had made to order from his own design plain, clear, glass cylindrical vases for his personal use.

Discussions as to future development of the daffodil brought out his opinions that if the possible limits in size had not been reached at least the desirable limits had been. He thought ideals in regard to beauty of form should be revised because raisers were in a rut trying to make blooms round and symmetrical. He really thought that poets with freer petals were more beautiful than cultivars that looked too much like a cartwheel. He suggested a future for a long-petalled or a star-petalled flower. As for color, he noticed the public taste was getting away from strong colors and turning toward more delicate ones. One stand of his superfine flowers was particularly notable for color. Most interesting was one with a pale green center, a delicate colored flat eye, and a pinky-green colored band. many of the other flowers on the stand had green centers surrounded by a peculiar white with a curious suspicion of green in it. As it turned out, that was Engleheart's last stand of seedling poets at the Midland Show. World War I came along. Travel was difficult if not impossible; and although the Society put on shows in 1915 and 1916, Engleheart could not come and his usual exhibits were greatly missed. In a tribute to his work it was said, "At his best he is apart from others in the wonderful variety and novelty of his creations. Some day he may be equalled but it will be long before he is surpassed." His own thoughts about his work were modest—he warned would-be daffodil breeders that they might have to cultivate hundreds of daffodils for thirty years to get two that were worthwhile, as the life of a daffodil raiser is eleven months of strenuous work resulting in one month of bitter disappointment.

- There's always a chance, though, that fate may guide the hand of a person who wants to follow in Engleheart's footsteps to create something

worthy from the treasures he left.

Lives of Great Men remind us
We can make our own lives sublime;
And departing, leave behind us
Footprints on the sands of time.
Henry Wadsworth Longfellow

THE ROUND ROBINS

FRANCES ARMSTRONG, Covington, Virginia

(from the Middle Atlantic Regional Newsletter, January, 1985)

A Round Robin is a group of letters written by and circulated among people with a common interest, in our case, daffodils or some aspect of daffodil growing. Each robin has a list of members, ideally eight to ten people. When a member receives a packet of letters, he removes his old letter, writes a new one and sends the whole package of letters on to the next person on the list. He is asked to do this within a week or two.

Each robin has a director whose duty it is to see that the robin moves along and who may suggest subjects for discussion. When each member sends the packet of letters on, he is asked to also send the director a card. So then, if another card is not forthcoming within a month or two, the director must communicate with the overdue one either to prod or to ascertain the cause of the delay. Sad to report, the robins have been lost in the mail on several occasions. In that case the director starts a new letter.

All the Robins fly by the Chairman of the Robins Committee, Otis Etheredge, of Saluda, South Carolina, usually just before they return to the director. He duplicates them, sometimes adds a note or a suggestion, and sends them on. If there is anything of general interest to the ADS in

any Robin, he reports it in the Journal.

Otis informs me that currently we have only five robins. Number 1 is the Hybridizer's Robin which he describes as the most consistently active Robin. There have been a number of new members in the past year making a total of eighteen now. Instead of being divided into two Robins, it was given a new pattern of flight in the form of a figure 8. Dr. Bill Bender is the flight director. Both loops converge with him. He duplicates the letters and adds Loop 1 letters to the packet of Loop 2 letters and vice versa. In that way the letters circulate faster and no one misses the good information in the other loop. Dr. Bender tells me that they no longer call it a Robin but rather a Hummingbird. He says the hummingbird has many flight patterns and does a great deal of hybridizing whereas the robin does not do much. Several well known hybridizers belong to this group—Roberta Watrous, Dr. Throckmorton, George Morrill, Meg Yerger.

Number 2, the Men's Robin, has eight members. This one has no particular director and members discuss many aspects of horticulture besides daffodils. Number 3, the Poeticus Robin, has nine members, with Meg Yerger as director. Number 4, the Miniature Robin, with Sue Robinson as director has ten members. This Robin disappeared several years ago, was reorganized by Sue, and is now very active, with one member in New Zealand. Otis says we don't recruit members out of the country because of time, mailing expense, and possible loss; but if some ask, we try to accommodate them. I am a member of this robin along with Lucy Christian and Celeste Cox. Other members include Nancy Wilson and Mary Lou Gripshover in California, Rosalie Dilliard in Arkansas, Jim Wells in New Jersey, and Dave Karnstedt in Minnesota.

Number 5 is the Southeast General Robin. I have been a member of this robin for twenty-three years, and am currently serving as director. This surely must be one of the oldest robins and most of our members have been from the southeastern part of the United States, not necessarily the Southeast Region. We discuss a wide variety of daffodil subjects from cultivars that do well for us, problems of culture, storage problems, show winnings, most anything that pops into our heads. Lucy Christian was a member when I joined and shortly thereafter Bernice Ford and Sue Robinson joined. Marie Bozievich was a member until other ADS duties took too much of her time. Loyce McKenzie, Mississippi; Delia Bankhead, Virginia; Pat Bates, Tennessee; and one lone male member, Barry Nichols of Texas, now join us.

In return for the nuisance of writing a few letters a year, I have received much from the Round Robins in information and lasting friendships. There are several people in the United States interested in a Division 7 Robin. Otis writes that he did not receive enough response to his note in the Journal, so he has enlarged it to include some other divisions and the species. If interested contact Otis Etheredge. Loyce McKenzie has agreed to be director. Unless you absolutely detest writing letters, you will have many happy and informative moments when your robin comes flying around.

AMERICAN DAFFODIL SOCIETY, INC. INCOME AND EXPENSE — YEAR ENDED DECEMBER 31,1984

Dues paid in 1984 \$13,720.78 Life Memberships Paid in 1984 1,800.00 Contributions 20.00 Memorial Gifts 350.00 Sale of Books, Supplies, etc.: Income Expenses R.H.S. Yearbooks \$382.50 \$51.37 A.H.S. Handbooks 117.00 — Daffodils to Show and Grow 686.00 — Handbook for Judges 501.50 — Old RHS and Out of Print Books 482.65 — A.D.S. Publications (incl. Barr) 252.25 — A.D.S. Membership Pins 173.00 — Data Bank Printouts and Binders 597.19 640.00 Binders for Journals 107.00 — Show Entry Cards 610.00 1,004.22 Daffodils in Ireland 20.00 — Brief Guide to Growing Daffodils — 166.16
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Advertising in Journal
Judges and Refresher Fees
Slide Rentals
Interest Received
Convention Surplus
TOTAL INCOME
EXPENSES:
Daffodil Journal - Printing and Mailing \$12,804.04
Deposit on Roster
Office Expense:
Printing and Supplies
Postage and Telephone
Executive Director and Clerical
Social Security Tax, net
Bank Service Charges
Computer Lists and Labels
Bookcase
Regional Vice-Presidents (Newsletters)
Secretary (\$58.60) and Committees (\$177.19)
Insurance and Bond
Grant from Educational and Research Fund
Advance to 1985 Convention Committee
Dues - National Council Of Garden Clubs
TOTAL EXPENSES



AMERICAN DAFFODIL SOCIETY, INC. BALANCE SHEET — DECEMBER 31, 1984

ASSETS:		
Cash in Bank - Bank of Mississippi		\$ 5,878.32
Moneymart Assets - Prudential-Bache		2,577.07
C.D. First Federal S.&L., Phoenix, 12.75% due 10-6-86		20,000.00
C.D. First National Bank of Seattle, 11.5% due 12-8-86		5,000.00
C.D. Homestead S&L, MPRG, 13.15%, due 5-30-89		11,000.00
C.D. Bank of Mississippi, 9.00%, Due 5-1-85		3,500.00
Ford Motor Credit Corp., 81/2% Bonds due 3-15-91		10,000.00
Accrued Interest not due on Ford Bonds		247.50
Inventory of Publications, etc.:		
R.H.S. Yearbooks (196)	\$ 686.00	
Old RHS Yearbooks	200.00	Est.
A.H.S. Handbooks (480)	480.00	
Handbook for Judges (400)	400.00	
A.D.S. Membership Pins (22)	97.20	
Show Entry Cards - Jarge (62M)	790.50	
Show Entry Cards - min. (23M)	274.85	
Daffodils in Ireland (16)	16.00	
Peter Barr Books (21)	16.80	
Brief Guide to Growing Daffodils (250)	165.00	3,126.35
Inventory of Medals and Trophies:		
Medal Dies	15.00	
Gold and Silver Medals	359.50	
Larry Mains Silver Trays (min.) (6)	270.00	644.50
TOTAL ASSETS		\$61,973.74
LIABILITIES:		ψο1,770.71
		\$ 7,021.83
Dues Paid in Advance (in whole or in part)		19,050.00
Memorial Fund		825,00
Education and Research Fund:		023.00
John Larus Memorial	\$10,000.00	
Other Contributions	160.28	
Convention Surpluses Added	7,228.02	
Interest on Fund Assets (\$20,000 CD)	9,046.72	
	-3,865.00	22,570.02
Reserved for Balance on Roster		711.02
Reserved for Balance due on Daffodils to Show and Grow		2,547.13
Net Worth		\$ 9,248.74
TOTAL LIABILITIES		\$61,973.74
W	ells Knierim	, Treasurer

AUDIT STATEMENT

The above income statement and balance sheet for the year 1984 were prepared using the cash receipts and disbursement records maintained by the Executive Director. The balances were verified with the bank statement and account statements of the financial institutions indicated. The inventory of publications is shown at cost except that no value is included for surplus ADS publications. In addition to the assets shown, the Society has a substantial library of books on daffodil culture, many of which are rare and valuable, and several colored slide collections. It also has a number of memorial silver trophies awarded at convention shows. The slides, books, and trophies were mostly contributed and no value is included.

Dues received in the current year, covering periods beyond the end of the year, were prorated and amounts covering such future periods are shown as a liability as are life memberships.

Receipts for dues and other income were verified with deposit slips, and disbursements were checked with suppliers' invoices and cancelled checks signed by the Treasurer and the Executive Director.

Based on this review, it is my opinion that this report presents an accurate statement of the financial condition of the Society and that the records are being maintained in a sound and orderly manner.

Jane A. Moore, Auditor

March 17, 1985

PERENNIAL COMPANIONS FOR DAFFODILS

DORRIS and LURA EMIG, Columbus, Ohio

(from Cods Corner, October, 1984)

Mixed perennial beds being "our thing," we intersperse daffodils with other plants.

The smaller cultivars of daffodils make good edging clumps, along with the miniature dwarf iris and the earlier blooming standard dwarf bearded iris which bloom with the midseason and late daffodils.

Chionodoxa, an early blooming bulb in shades of blue and lavender, are nice with the smaller early daffodils. The chionodoxa are only three inches high, but a clump makes a splash of color! Since most of the early daffodils are yellow, this seems a pleasing combination.

The Helleborus Orientalis will have been blooming when the daffodils start to bloom, but the flowers will usually be nice as the daffodils start. The foliage of the helleborus will remain attractive during the growing season.

In the shady areas, primula bloom along with daffodils. The color combinations are numerous, with so many colors being available in primula.

Brunnera macrophylla, with blue forget-me-not type flowers, make lovely combinations with daffodils. The blooms come before the large leaves develop. This plant takes a large space as the foliage lasts through the growing season.

The well-known grape hyacinths, in varying shades of blue, complement the late daffodils. The foliage of the grape hyacinth also disappears after blooming, leaving a space to be handled during the summer months. The grape hyacinths usually send up their green leaves in the fall, claiming their space again.

The bright yellow alyssum sets off the white daffodils, but yellow daffodils fade into the alyssum from a distance.

The creeping phlox (pinks, white, and lavender) make good companion plants for daffodil clumps. But, as the phlox spreads, the daffodils will not survive if covered. The phlox blooms better, however, if cut back after bloom. This will also leave spaces for the daffodils.

The old-fashioned Vinca minor, a ground cover with lavender blooms, will allow daffodils to grow through the foliage and is nice cover for "naturalizing" an area.

A dry, shady area will allow the ground cover, Sweet Woodruff, to grow. Daffodils will grow in this same area with some help to keep from becoming too dry. The white bloom is attractive but comes along later than the daffodil bloom.

Pulmonaria with pink and blue blooms grow well in shaded areas and will bloom along with the daffodils. Some of the late poeticus (Division 9) look well in this situation. The foliage of pulmonaria is attractive throughout the growing season.

Iberis sempervirens, an evergreen plant with white blooms, make attractive back-grounds for daffodils in color. Again, care must be taken to keep the iberis from smothering the daffodils.

The various sedums, while not blooming with the daffodils, are

attractive foliage companions.

Arabis, white and pink, can be used for edging and in the rock garden.

This provides nice contrast for the daffodil blooms.

The foliage of most of the plants mentioned provides contrast with the up-right foliage of the daffodil, as most of these plants have foliage that stays low, at least at the time the daffodils are in bloom, but spreads to cover the area.

Most of the spaces left by the daffodils while dormant can be filled with the small marigolds, providing color and weed control. Any other small

annual without deep roots could be used for the same purpose.

The naming of particular cultivars of daffodils has been omitted. The same effect can be produced with a variety of different cultivars. The most pleasant combination is by trial and error, sometimes by serendipity. And, as always, we must depend on Mother Nature to provide the best growing season.

THE NAMES OF OUR DAFFODILS

GERTRUDE J. WISTER, Swarthmore, Pennsylvania

(from The Daffodil Bulletin, February, 1964)

Suppose you had to pick out new names for new cultivars of flowers each year. How would you proceed? What sort of names would you use? You would probably find choice difficult, for not only must the names be not already in use for the same kind of flower, but you would like the ones you chose to be suitable.

What have other breeders—and of course we mean daffodil breeders—used for names? Place names are easy hints to the name of breeders. The Brodie used Scottish names, of course, such as Elgin, Moray, Cromarty, and Loch Fyne. He also used place names from the Near East where he served during the first World War, such as Hebron, Varna, Pera, and Stamboul.

As for The Brodie himself, he was The Brodie of Brodie, and lived at Brodie Castle. Use of *The* in front of a name in Scotland indicates a highland chief or chieftain. Several flowers raised by The Brodie were introduced by Calvert, a

Cornishman, and bear the Cornish place name Coverack.

Many Cornishmen used local place names. Names starting with Tre-, Pen-, and Pol- are apt to belong to cultivars named by a Williams, or by Alec Gray, or Favell. As for the names of saints, almost half of them were chosen by Cornishmen. St. Keverne, St. Ives, St. Agnes—those are Cornish place names, no doubt connected with old churches. Let us be thankful that A.M. Wilson, who lived in Wales, did not use any of the difficult Welsh names, but chose names like Content and Jalna.

We all know how many Irish place names are attached to the daffodils of Dunlop, Richardson, and Guy Wilson. The prefix Bally-indicates a small village; a slieve is a mountain; a lough, a lake, and pronounced lock. The name Ballyferis came to a daffodil by way of a race horse, for Richardson was fond of naming flowers after horses. Others are Mahmoud, Alycidon, and Tudor Minstrel. (I saw Tudor Minstrel this summer at a famous Kentucky stud farm, and a handsome fellow he is.)

Names of lighthouses were used by Richardson for his famous red cups. Tuskar Light and Fastnet are two; and I assume Rockall, that lonely rocky isle a third of the way from Ireland to Iceland, famous for its sea birds, is crowned by a light.

Other names, too, tell what a flower looks like. Everest, Nilkanta, Mount Hood, and Kanchenjunga have to be all white, and we expect Paricutin, Krakatoa, and Cotopaxi to be fiery. New Moon is aptly named, with its delicate circlet of color.

The gentle Rev. George Engleheart used Biblical names (Gaza, Berrsheba) which seems logical, but why did he name a yellow trumpet Agnostic? He used some names of poets for cultivars of poets—Horace, Dante, Rupert Brooke, and Caedmon—so natural a choice it is suprising he did not use more.

Alec Gray's Cobweb, Mustard Seed, and Peaseblossom are named for fairies in A Midsummer Night's Dream, but the fourth fairy, Moth, seems to have been neglected. Another of Gray's lovely daffodils, Sidhe, should be pronounced Shee, and is sometimes written that way. A shee is a fairy tribe, and the Irish word for

fairy is sheehogue (sidheog). A banshee is a woman fairy.

What about some people whose names have been attached to daffodils? Rustom Pasha was a Turkish ambassador to the Court of St. James, but to me notable because of his interest in conserving a fine grove of cedars in Lebanon. He had it fenced to keep out voracious goats. The famous Lily Langtry has given two names to daffodils—Mrs. Langtry, and Lady de Bathe. Moira O'Neill—the Irish poetess, Diasy Schaffer—a famous Dutch lawyer, and Sacajawea—the young Indian woman who carried her baby with her as she served as interpreter for the Lewis and Clark expedition during twenty long months, are three others who, with the famous beauty, make a varied quartet. Other women, the wives of Dutch growers and bulb dealers in this country, seem only shadows of firm names, though members of the firms living today probably think of them as grandmothers. Mrs. Ernest H. Krelage, Mme. van Waveren, Mrs. Chester J. Hunt, and many others gave names to daffodils. Whiteley Gem came by its name in a queer way. It is named for a London department store.

E.C. Powell, one of the first American daffodil breeders, chose Indian names. Oconee, Nakota, and Cheyenne are among them. Grant Mitsch has chosen many names typical of the Pacific Northwest, of course, including Clackamas, Chinook,

Bonneville, and Klamath.

But perhaps the pleasantest names of all are those with poetry and imagination about them. As I look down the slope below our house this colorful October day, I see at the edge of a woodland path hundreds of white and purple cups of colchicums. Five months from now I shall be watching for the swaying of March Breeze. In front of the house, graceful Dove Wings will be sending up its buds, and Fleetwing showing green near today's spears of autumn crocuses. Aircastle, Allurement, Moonmist—what names to dream of the winter through! Daydream, Lunar Rainbow, Gay Mood—that Grant Mitsch has a way with names, hasn't he?

Early Riser and Promptitude will help to ring the curtain up on the daffodil

season. Lamplight, Lights Out, and Addio will ring it down.

And let me raise this last thought. How do you suppose Mr. Radcliff was feeling the day he decided to name a daffodil Aspirin?

THE AUSTRALIAN CONTRIBUTION

PETER RAMSAY, Hamilton, New Zealand

(from the Australian Daffodil Society Newsletter, January, 1982)

On reading the most recent Australian Newsletter I experienced a twinge of conscience. I recalled that I'd promised "Mac" McIlraith, who was a welcome visitor in our garden last spring, to write about Australian cultivars which have done well with me. I agreed to do this knowing that I'd enjoy looking up old records and reviewing some of the better flowers. This kind of exercise almost inevitably leads to the projector being dusted off and the assessment being carried on with the aid of colored slides. It's a good mid-winter time waster!

My acquaintance with Australian-raised cultivars stretches back to my earliest growing days. I remember my father raving over Ivo Fell's glorious color and plotting a variety of strategies to get the perianth white and to stop the cup burning. Then came Highfield Beauty, that milestone in the development of tazetta's, closely followed by those good small cups, Mrs. David Calvert, Marilyn, Polar Imp, and Calleen, all of which remain in my collection and take premier blooms from time to time.

My real acquaintance with Australian-raised flowers came with our shift from Wellington to Hamilton, and the purchase of our own land. Hitherto suppressed yellow fever gave way to an extremely virulent outbreak which remains despite the best efforts of virus, fly and nematode! In 1971, we visited our first national show as exhibitors; and not only did we meet the late Tim Jackson there, but we also saw some lovely cultivars of his raising exhibited by a prominent amateur, Blair Roddick. Blair quickly dispelled my view that importing was diffcult and only for the pros, and suggested that currency and customs presented few problems. So, after a delay in getting a catalog. I placed my first order with the Jacksons in 1974. My records show that I bought a bulb of Akala, Berit, Ristin, Yelmo, Lod, Anitra, Yves, and Kasia for the sum of \$50.00. The return from these purchases was not immediate. For several years, while having great substance they always seemed to have a mitten which kept them off the show bench. Incidentally, this proves a theory of several top growers such as our Patron, Mavis Verry, that it is not until you 'make' a flower yourself that you are able to tell how that cultivar will do for you. The moral is—don't discard too soon as some take three to five years to settle into your unique and peculiar habits! By 1977, the Jackson purchases had settled and were beginning to form the backbone of my collection. That they were wise choices is shown by the number of times they appeared in medal-winning classes and achieved premier and best bloom honors. All of the original Jackson order are still grown with the exception of Yves and Yelmo which I reluctantly discarded with virus. In 1974 I also bought some other 'Aussies' from P & G Phillips. These included Banongill which gave me an immediate return with a best bloom (and little else since), Goldish, Golden, Lady Slim, Kai, White Ki, and Vixi. Of these Golden, Vixi, and Lady Slim still survive, although the latter is a very difficult customer. (Since writing these notes Golden took the reserve champion bloom at the National Show in Howick).

Since 1974, I've continued to build on the basic collection and now would have well over 100 Australian-raised. These are mostly from Jackson's, but with a fair sprinkling of Ross Glover's, the Fairbairn's, Tom Piper's, and Lindsay Dettman's. Having viewed daffodils in the Northern Hemisphere, and having a collection which is too extensive, I rank a lot of my Aussies in the very top drawer. The ones which seem to float to the surface with me most regularly are: Anitra, the best early white yet available, and rivalled only by White Star; in the past four years it had

given me seven premier blooms and three best blooms including the 1980 National Grand Champion (premier 1 W-W at Howick National yet again in 1981); Akala, a clear, consistent yellow which nicks rarely; Triton, a tidy 2 W-Y; Placid, an unusual and pretty yellow small cup which is better than anything else in this area; Calleen, an under-rated small cup; Dimity, at its best perfect and looks like the small cup which it is; Vahu, which vies with Dailmanach as the best ever pink; Immaculate, a quick settler and at the very top of a strong division—already a best bloom at the late show; Tia, pressing its parent, Dimity, and premier 3 Y-R at the national when grown by Graham Phillips last year; Polar Imp, an early 3 W-W which takes lots of premiers; Tiger Tim, a recent purchase which is a definite advance in its division and has already taken a premier bloom; Lynette Sholl, another recent buy which looks highly promising; Craig, an excellent golden trumpet; Flash Affair, which with N.Z. raised Moiki I rank as the two best 2 W-Ys in the world; Dear Me. smallish, but oh what color; Ida May, a delicious, new color break which will become a 'must' for variation in collections; Atro, another recent purchase which looks to be the pick of the 2 Y-Rs to date; Ristin, gorgeous color, heavy substance, a best bloom on its day; Marilyn, a lovely rimmed much-under-estimated small cup—it is virused with me but I'm growing it in isolation until I locate clean stock as I can't bring myself to part with it; Chaste, not quite up to premier standard but unique; Lod, an older one which is short-stemmed and flares its anthers but is still a valuable 1 W-Y; Juel, not highly colored, but consistent; Betrin, a bit narrow in the petals but gets premiers in a weak division; Cinel, a smallish flower but highly colored; Karen Lee, yet to settle, but looking good; Pink Silhouette, a charmer; Voda, a winner amongst the early small cups; Ziska, taking a long time to settle but will, I believe, be Akala's successor.

These are only a few of the many Australian cultivars which have given me great pleasure over the years. By the way, it's a pity that New Zealand cultivars are difficult to get into Australia because of your zealous agricultural regulations. Any grower worth his/her salt always grows new cultivars in strict isolation and rogues, burns, and sterilizes soil at the first sign of trouble. As "Mac" noted, my own pattern includes annual treatment of soil with methyl bromide; and while this may be for the specialist, I believe that it pays dividends in terms of hygiene. Combined with regular hot water treatment, a cold dip—a nematicide, Aldex and Formalin and vicious roguing, health and hygiene are looked after. If Australians were able to get the latest of O'More's 1 Y-Ys and 2 Y-Rs, Brogden's pinks, red cups, and 2 Y-Ys, Phillip's bicolors and small cups, and Bell's rimmed small cups and doubles, then I'm sure that Tension wouldn't be the only Kiwi premier listed in your results! In the meantime, it seems that we in New Zealand are getting the best of all worlds!

GERALD D. WALTZ

Gerald Downes Waltz, age 83, of Roanoke, Virginia, died in early March after a long bout with Parkinson's disease. For many years Mr. Waltz maintained a bulb and flower business in Salem, near Roanoke, where he carried many of the finest bulbs available from Ireland, England, Holland, and America. He was a charter member of the ADS and attended many of the early conventions.

ROSEWARNE EXPERIMENTAL HORTICULTURAL STATION

IVOR FOX, England

(from the Journal of the Daffodil Society [Britain], February, 1983)

The group of Yorkshire enthusiasts who made the long trip to the Cornish bulb fields also visited the Rosewarne Experimental Horticultural Station at Camborne on Saturday, 27th March.

Rosewarne E.H.S. is one of a chain of seven experimental centers maintained by the Agricultural Development and Advisory Service (ADAS), a support service to farmers and growers provided by the Ministry of Agriculture, Fisheries, & Food. The experimental centers are located in major areas of horticultural production and provide facilities for undertaking investigations on the crops of commercial importance in those regions.

The experimental station was established in 1952, and the estate covers 52 hectares on an exposed ridge about two miles from the sea. Besides daffodils and other ornamentals, major aspects of experimental work are concerned with winter and spring maturing vegetables.

We were received by Michael Pollock, Director, and Barbara Fry, who is internationally known for her research and breeding of daffodils. The program consisted of:—

- inspection of the cultivar trial beds
- a tour of the new seedling beds
- indoor research testing methods on "vase life"
- discussion on the breeding of commercial daffodils.

The main points of interest from each section were as follows.

TRIAL AND EXPERIMENTAL BEDS: The cultivar trial beds are a sight to behold. They consist of thirty beds each containing on average twenty cultivars and a minimum of twelve bulbs of each cultivar. So if my math is correct, 7,200 bulbs with two flowers per bulb and 80% in flower you can imagine the magnificent sight. There is also a bonus, although none is necessary, and that is the quality and size of the flowers. The amateur hybridizer of trumpets will wonder why he is bothering after seeing such tried and tested cultivars as Carrickbeg, Fortwilliam, Arctic Gold, Ristin, Kingscourt, and Viking grown to 5" across and perianths as smooth as baby's bottom. Is it the soil, climate, or knowledge? I believe it to be a combination of all three ingredients, as with any good cake!

The following cultivars were also up to first class exhibition standard:

Division 1—Royal Armour, Sterling, Bravoure, Karamudli, Rashee, Empress of Ireland.

Division 2—Border Chief, Ormeau, Revelry, Butterscotch, Falstaff, Pinza, Vulcan, Avenger, Festivity, Irish Minstrel, Wedding Bell, Daydream.

Division 3—Perimeter, Aircastle, Audubon, Merlin, Rob Roy, Silent Beauty, Woodland Prince.

Division 4—Ascot, Hawaii, Takoradi, Enterprise.

Division 7 & 8—Portchapel, Geranium, St. Agnes, Golden Dawn.

Division 9—Cantabile, Hexameter, Perdita, Dactyl.

Division 11-Abel Tasman, Cassata, Mistral.

NEW SEEDLING BEDS: The breeding program at Rosewarne is designed to produce new, improved, commercial cultivars such as Tamara. The main objective is to produce a successful line of new daffodils which a) flower earlier, b) have a longer vase life, c) can be used for bulb production throughout the U.K., d) provide income and export opportunities for British growers.

As a result of these objectives, the majority of ten years plus seedlings are not up to show standard. I believe that this is due to the fact that a large number are discarded at an early stage due to flowering time. As an exhibitor this is a great waste and I only hope that some local commercial growers are given the opportunity of purchasing these small stocks.

In the new beds, which contained about 10,000 crosses, there were some very promising exhibition seedlings. The best appeared to be 1 Y-Ys and 2 Y-Ys, not a lot of white perianths on view. I presume this is due to the housewife's traditional demand for yellow daffodils.

I look forward with great interest to seeing Rosewarne-raised cultivars in the shops as cut flowers and winning first prizes at Solihull before the end of the 80s.

RESEARCH TESTING OF VASE LIFE: It is fascinating to be able to see the laboratory conditions under which all new cultivars are tested for vase life.

Since growers changed to marketing daffodils in bud, the popularity of the flower has increased considerably, since buds travel better, last longer and give the buyer the pleasure of watching them develop in the home. In the past, when buying fully open flowers, one could never be sure how long they would last.

We now expect a minimum vase life of seven days at a temperature of 15.6°C (60°F); and if kept in a cool room, 10-14 days is possible. Incidentally, the juice from cut daffodil stalks will prevent other cut flowers from taking up water, so it is best to keep them on their own.

The testing of new cultivars is carried out in sealed rooms with a constant air temperature and a variety of air mixtures. The effects of tobacco smoke are even taken into consideration. It seems no person or plant is safe from the weed! The results are carefully monitored and are available to the trade and commercial grower.

The Station's efforts to raise new commercial daffodils reached an important state with the sale of the stock of TAMARA and the program, which is hopefully a blueprint for a successful new line, is set out in this summary of their fact sheet.

The aim was to use Rijnveld's Early Sensation and improve it by crossing with tall, good quality cultivars.

1964. One of many crosses was Trenance (seed) × Rijnveld's Early Sensation (pollen) and the seed was sown as soon as ripe under code 64/48.

1965-6-7. For the first three seasons the young plants remained in the seedbed.

1968. Seedlings now in field beds and a few flowered.

1969. Most of the seedlings now flowering and the really good plants were marked during regular inspections. One selection, 64/48/1 was early flowering and vigorous and was lifted and planted separately for detailed annual examination. 1970-75. Bulbs divided naturally and careful records kept to check performance and health.

1975-79. Stock had increased sufficiently to allow division into two groups with each group hot water treated in alternate years to control pests and diseases.

Full annual records are kept of flowering date, stem and leaf length, vase life, flower size, yield, bulb increase, forcing quality and resistance to disease. In addition it was compared each year with the standard cultivar, Golden Harvest, and on all counts it performed well, consistently flowering before Golden Harvest, in most seasons 3-4 weeks earlier. During this period stocks were increased by twin-scaling and micropropagation to advance the date of release to commerce.

1980. Stock inspected by growers' panel for specialist opinion, and after inspection over two seasons, 64/48/1 was granted plant breeders rights to give any future owner the right to exclusive propagation and sale.

1981. The name TAMARA was approved and registered and growers' panel again inspected stock to agree commercial potential. The National Seed Development Organization invited commercial growers and organizations in UK to tender for outright purchase of the stock of 1,500 bulbs of TAMARA. The Cornwall Area Bulb Growers Association successfully bid for the stock which is now growing on several farms and propagation continues until a considerable acreage is available for early flower production.

In final summary, I strongly recommend all members to attend a Rosewarne Public Open Day which is usually the last Saturday in March. An interesting day is guaranteed, with such horticultural expertise available for questions that you are sure to broaden your thinking base and knowledge. For confirmation of arrangements, contact The Director, Rosewarne E.H.S. Camborne, Cornwall.



(from The Mayflower, September, 1897)

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MICROCLIMATES OR "WHY ARE MY THREE'S SO LATE?"

DONNA DIETSCH, Columbus, Ohio

(from Cods Corner, July 1984)

Once you get into growing daffodils as a hobby, you notice that even though you have some of the same cultivars that other members do, they always seem to have them for the show while yours are still in the tight bud stage. Depressing, isn't it? You need one more division to complete a collection and nothing is up. Sometimes something is up, but it is either a "scruffy" cultivar or it has this very large nick in the petal! The week after the show, or often when you get home the day of the show, there it is, in full bloom...the beautiful, expensive one that you bought, knowing that if you showed it, it would win a blue ribbon...and too late for the show! Of course, you can always go to one of the shows in some of the cities to the north of us. However, last year I came back from Akron to find two cultivars that I had wanted to show in full bloom. Akron, naturally, is the last show in Ohio. So what can you do to encourage earlier blooming?

"Microclimates" is the term that is used to describe a section of an area that is either colder or warmer than the surrounding area. If your yard is in a depression between higher ground the cold air will remain in your yard longer than the surrounding area, since cold air is heavier than warm. It will also freeze earlier in the fall. Conversely, if your yard is on top of a rise and the surrounding area is lower, you will experience warmer conditions, earlier bloom in the spring and later frosts. This is a rule of thumb but a yard can contain several microclimates within itself.

I can use my own yard as an example since it contains several microclimates. My house faces southeast. The front of the house is always warmer than the back by virtue of its southern exposure. The bed which is close to the front is even warmer since it is surrounded on three sides by sidewalk which retains the heat of the sun. It also receives warmth from the walls of the house, especially since my house is a bi-level. This warm bed is always the first to bloom, and in there are planted the Division 3s (short cupped) and other late bloomers. The bed immediately in front of the walk is also early and I can even get some poeticus to bloom for our show here in Columbus. On the northeast side of the house is another warmer bed. It is close to the side of the house and benefits from the warmth of the walls.

The back yard is another story altogether. Facing northwest, it is on the top of a hill and the slope is about forty feet down to the bottom. A warm spot, you say? Nope, because directly behind the slope is Big Walnut Creek and behind that, about a half mile of very low land. The wind picks up momentum over the plain, absorbs the cold from the creek and brings it all up to my yard. Since the prevailing winds here in Columbus are

usually from the southwest, my backyard gets it most of the time. The result is that the backyard is usually a week behind the front.

All of this can be used to my advantage, however. Late bloomers can be planted in front to encourage earlier bloom and early bloomers in back for later bloom. Some can be planted in both spots so that the same cultivar will be available for early or late shows.

There are other methods that can be used to produce microclimates in a yard where none exist naturally. Raising the beds will cause the soil to warm up faster in the spring and using loose soil will make it warm up even faster yet. Windbreaks can be used effectively to produce microclimates. A tall stockade fence will hold in the warmth of the sun to warm the soil faster. Tall evergreen hedges will produce the same effect. However, planting close to tall evergreens or fences will retard bloom if the planting is done on the shady side of the barrier. Remember not to plant too close to shrubs, however, so that your bulbs will not have to compete with the shrubs for water and nutrients. Planting on the south side of a large rock or a solid fence will also hasten bloom on bulbs planted there. I have heard of people who use the black plastic mulch on the soil around the clumps to encourage bloom and newspaper to retard it. (Black absorbs heat and white reflects it.) If all else fails, and you need a flower in a few days and it looks like a week or more until bloom, I have read of people who water the clump with warm water to warm up the surrounding soil. I would think that you would not want to use water much over 100°, though.

Check your microclimates and use some of the suggestions and it's your turn to write an article next.

DOUBLE DAFFODILS

HAROLD CROSS, President, Tasmanian Daffodil Council

(Adapted from his presentation to Springworld '84)

In the preface to his booklet, Peter Barr referred to a publication issued in Antwerp in 1576 by Clusius. Its title, Rariorum Stirpium Historiae, translates into English as Story of Rare Stocks. Its importance for our purpose is that it apparently contains a clearly identifiable woodcut of the double known as "Double Roman."

After Clusius, the next major publication on daffodils appears to have been a folio published in England in 1629 by John Parkinson and entitled *Paradisus Terrestris*. This folio, An Earthly Paradise, describes ninety-six daffodils. Of one of these it is recorded that the bulbs first imported into England were owned by a Fleming named Van Sion. The story goes that he first flowered it in 1620 and before his death gave the bulbs to a George

Wilmer so that some called it Wilmer's Double Daffodil. Then early in the nineteenth century Haworth gave it yet another name of Telamonius Plenus.

Barr says that Parkinson described three forms of double poeticus. It seems probable that one of these is the one called Flore Pleno or Albus Plenus Odoratus. As late as 1966, George Lee described this one as "desirable but it shares with many doubles a penchant for blind flower buds."

Two other interesting doubles with a long history both have the name Queen Anne, but the names refer to two different daffodils and two different queens. One, named after Queen Anne of Austria, appeared in 1601, and apparently is still available under the titles of capax plenus or Eystettensis. The other, named after Queen Anne of England, disappeared for a long time and was apparently rediscovered earlier this century in a Cornish garden named Pencrebar—the name by which it is commonly known today.

There are also quite a number of other doubles of varying though generally poor quality which go under the surname of Phoenix with a whole range of given names such as yellow, sulphur, orange, etc. As far as I know, nobody seems quite sure where they came from; and some had quite picturesque alternative titles. In some places I know of in Tasmania, they can be found growing in paddocks with no other sign nearby of what was most probably once somebody's home.

On page 25 of his booklet Barr wrote, "Nearly all our double varieties of today were known to and figured by Parkinson in 1629." Thus these doubles had flourished in English gardens for over two and a half centuries when in 1884 the Royal Horticultural Society set up a committee to revise the classification of daffodils.

This committee adopted a classification first put forward by its chairman, J.G. Baker, in 1869. Baker was then head of the Kew Herbarium, and he grouped daffodils into three classes depending—as do our present Divisions, 1, 2 and, 3—on the length of the cup. He added a fourth division called "Monstrosities" and sub-titled "Daffodils With Double Flowers." To some extent, doubles have suffered from that unfortunate title of "Monstrosities" ever since. Indeed, some more modern writers have been little, if any, more generous. On page 116 of his book, The Daffodil Mr. Michael Jefferson-Brown wrote, "I feel that the smaller double daffodils have less of the affectation and vulgar pomposity that is a blatant characteristic of many double daffodils." Now human beings may indeed be guilty of "affectation and vulgar pomposity," but I suggest to you that our double daffodils could well do without such anthropomorphic characteristics being attributed to them in florid prose.

Within the last century, the first person I know of to have persevered in attempts to breed double daffodils was William Copeland. Seven of his doubles are registered. The first of these—Royal Sovereign—was registered in 1908 and the last—Mrs. William Copeland—was registered in 1930.

Unfortunately, there does not appear to be any record of the breeding of five of them. But at least four—Feu de Joie, Irene Copeland, Mary Copeland, and Mrs. W. Copeland—are still available in Tasmania today.

Permit me to digress for a few moments to bring you some statistics taken from a print-out of the *Daffodil Data Bank* up to the end of 1979. We see that more doubles were registered in the decade 1970-1979 than in the

whole sixty years from 1900-1959.

Of all the doubles registered in the first eighty years of this century, more than one quarter were raised by the Richardsons and nearly another quarter were raised by Tasmanians. Of those where the seedparent was recorded, fifty-two, or nearly one-fifth, had Falaise as seedparent and another twenty-nine had Gay Time as seedparent. So the genetic bank for breeding doubles is much more limited than it is for Division 1, 2, and 3 flowers. In many cases it is what in human beings is called incest but in plants is called "inbreeding" if it is unsuccessful and "line-breeding" when it succeeds.

Before I leave the Data Bank statistics, here is one very curious fact that emerged from my analysis. The Data Bank records some twenty-nine registered doubles as being sports, that is, genetic mutations of existing cultivars. Not all of these are mules; some have viable pollen and at least one named Cheerfulness, a sport of a Division 8 cultivar named Elvira, gave rise to two more sports. A certain sameness took my attention and I found that no less than twenty-six out of the twenty-nine sports are recorded as being raised by people with Dutch surnames. Such a high proportion is incredible. Surely it is not only people with Dutch surnames who recognize sports and their potential value! I offer no suggested solution but it is an intriguing situation.

Of William Copeland's doubles, the one that is most important to us is Mary Copeland because it is the seedparent of Richardson's Falaise and thus one of the ancestors of very many of our modern daffodils. The breeding of both these flowers as recorded in the Data Bank is quite odd. Mary Copeland is shown with a poet as seedparent and Eggs and Bacon as pollen parent. That is, three quarters of Falaise parentage is poet and the other quarter is Eggs and Bacon. You certainly get some odd family trees in the daffodil world.

With Falaise, the Richardsons move into the field of breeding doubles and dominate that section for over thirty years. Falaise proved to be fertile and gave rise to a whole host of doubles that were a big advance on other doubles. In 1952 Double Event and Gaytime were registered. The fourth—and in my opinion one of the outstanding ones—was Acropolis which come along in 1955. In the twenty years from 1961-1980, there was no year when a Richardson double was not registered. In 1962 there were no fewer than eight, and in 1975 no fewer than seven of these Richardson doubles. Altogether there were three or more Richardson doubles registered in each of eleven years.

In an article in the American Daffodil Society Journal for June, 1983, Dr. David Willis reports on his examination of the Richardson records. He states that the cross that produced Falaise "was Mary Copeland (selfed) and produced one pod containing eight seeds which were sown on 11 July 1929, giving rise to six seedlings. In 1935 the stock consisted of one

double-nosed bulb plus one offset and it was described as 'best double, very late.'The name Falaise apparently was not applied until 1944 when the stock totalled 105 bulbs of various sizes." While not advocating so long a wait as that before naming, it is preferable to the practice adopted by some of bestowing a name when the first flower happens to be good.



Acropolis

In response to my queries, Dr. Willis wrote, inter alia, "The plant of Mary Copeland concerned in the production of Falaise was not growing in his beds but rather in his garden, so it is unlikely to have been subject to deliberate fertilization attempts. Indeed Richardson's recorded surprise at seeing the developing seed pod on the plant would tend to confirm this view. The indication of a poeticus daffodil as the male parent in the ADS computer print-out arose from the observation by Richardson of a poeticus scent in Falaise, and as this type of daffodil was growing close by he assumed a poeticus to have supplied the pollen."

Now what do we seek in doubles? I have been talking for some time now about doubles and I hope you have understood what I have been talking about. But what exactly do we mean by "double?" The Royal Horticultural Society classification is, as are quite a number of its daffodil classifications, accurate and completely useless. It does not even aspire to the status of a tautology. It says "Double Narcissi of Garden Origin. Distinguishing character—double flowers." Any primary school child knows that you have not classified something in a meaningful way when all you say about it is that a double daffodil has a double flower. It may be more helpful to define a double daffodil as a daffodil whose flower has layers of perianth segments (usually called "petals") with numerous smaller segments (usually called "petaloids") taking the place of the usual cup or corona. Such a definition rules out what I would call a semi-double, which has a standard perianth and a distinct cup full of petaloids. These flowers can be attractive and florists appreciate the novelty value of them, but they are not worth the serious attention of the daffodil breeder if he or she has much better material with which to work.

For the rest, we want the same things as we do with Divisions 1, 2, and 3—the clean color, good pose, strong stem, plenty of substance, and so on. However, two matters are of especial concern. One of these is the

stem, which needs to be much stronger than one that has lighter flowers to bear. A full double flower is much heavier than most, yet this too deserves to be held proudly aloft in all normal weather conditions. After all, a daffodil is not nearly as much use if it wins on the showbench but fails the acid test of adequate performance in a normal suburban garden.

Closely allied to this is the importance of the neck of the flower. The friend who set me firmly on the road to becoming a slave to Lady Narcissus told me, "First view the flower from the back; if it's not worth looking at from the back it is most unlikely to be worth looking at. Then look at the side and only if that passes, too, is it likely that the front will be worth inspection." That is not an infallible recipe but does provide sound guidelines. Be careful with the double that has virtually no neck at all because a heavy head is much more likely to snap off if the neck is excessively short.

Now let us turn to the actual mechanics of breeding double daffodils. The process, of course, is exactly the same as it is for all other divisions. That is, pollen from a flower has to be placed on a stigma—usually the stigma of a different flower. But with doubles you have three possible combinations. You can put pollen from a double onto the stigma of a double. You can put pollen from a double onto the stigma of a single flower. You can put pollen from a single flower onto the stigma of double.

With pollen from a double onto the stigma of a double you will get almost entirely doubles. With the other two possibilities only the passage of five or six years will tell what you will get. I have had some such crosses where the majority of seedlings turned out to be single flowers and others where the great majority, up to about ninety percent, were double. One such cross was Camelot crossed by a seedling that came from Kingscourt by Fiji. Thus three quarters of the immediate parentage was single flower, and yet some ninety percent of the seedlings were double. That cross proved to be one of the most productive crosses I have made.

The task is further complicated by the fact that some doubles never have stigma or pollen and so are useless for breeding. Such a flower is Golden Ducat. Some doubles have a stigma only occasionally. Some doubles have pollen only occasionally, and sometimes when they have pollen it is not immediately obvious. Let us examine some of these possibilities.

The first of these is of a double with normal stigma and normal anthers carried on normal filaments. When such you get, be thankful and do not waste the opportunity it presents. Next you may get a flower with a normal stigma but no sign of pollen anywhere. Again, you can use it for breeding.

However, all that glistens is not gold as the Prince of Morocco read from the Scroll in the casket he had chosen in *The Merchant of Venice*. The presence of a stigma does not, in my experience, always denote breeding potential. Look carefully at the stigma. Sometimes you will find that the style and stigma have three distinct circular sections, and in some flowers these three sections may be of different lengths. I do not know of seed developing as a result of the pollination of such stigma.

Then we sometimes have a double with no stigma but where pollen is present. This may take one of three forms. First we may find a normal anther on the usual filament but no stigma present. Then you may find what is obviously an anther but when you look carefully you may see it not on filament but fused to the edge of a petal. How it manages to develop on the edge of a petal I have no idea, but it does. Sometimes there may be no pollen visible on inspection of the flower. It is time consuming and often completely fruitless to search, but if I particularly want to use pollen from such a flower I will carefully tear the flower apart petal by petal—looking for pollen. I can give you no percentage of probability because at that time of the year I am far too busy to keep such records. But it does happen. Two of the best pink doubles I have came from a flower given to me by the late Tim Jackson. I remember well that Tim laughed when at a show in Launceston he handed over a flower labelled 192/69 because no pollen was apparent and he knew quite well what I would do with it. But my search was rewarded by finding the pollen hidden away, and two good pink doubles of mine have 192/69 as pollen parent.

For some people the complexity of a double daffodil makes for problems in judging or selecting them. so let us consider where each flower falls short of what we seek. Because of their complexity, doubles offer more scope for faults than single flowers; and the flowers I have raised have some defects. After all, I am aiming at an ideal which I trust will never be realized bacause if it is realized I will have nowhere to go. You know, I think St. Peter may well find daffodil breeders a cantankerous lot to get along with. Fortunately, I think Lucifer will want us even less. I certainly hope so as I prefer to do my daffodil breeding in a cool climate.

Let us consider a few common faults. Petals may be irregular and twisted, not spaced evenly throughout the flower. Petals may be uneven in size, and some will open fairly flat while the others remain folded. As in single flowers, torn petals are not acceptable; and, if possible, when a flower has a tendency to tear petals frequently, that fact should be considered seriously in any breeding program. The outer layer of petals may be somewhat hooded—that is, not in the same plane as the stem. There may be too few-or too many-petals, or some may be incurved while others are flat. As with other flowers, we look for good substance, color, good contrast and so on.

I hope I have convinced you, if, indeed you needed convincing, that modern double daffodils are not monstrosities but worthy of the opening lines of Keats's poem, "Endymion," which, as you know, read

A thing of beauty is a joy for ever: Its loveliness increases; it will never Pass into nothingness; but still will keep A bower quiet for us, and a sleep Full of sweet dreams, and health, and quiet breathing.

May your double daffodils do so for you.

HERE AND THERE

Our poet promoter of Princess Anne, Maryland, Meg Yerger, has now won new recognition as a flower arranger. At the March 26 annual meeting of The Federated Garden Clubs of Maryland, she was given the Mary F. Fitzpatrick Medal in a competition for distinguised flower arranger of the year. Her arrangement was called "Pretty Enough to Eat" and included tansy, collard greens, day lilies, grapes, and Anjou pears arranged in an s-curve in a black iron container. A color picture of the design was one of 54 selected for publication in the 1986 Vision of Beauty Calendar, published annually by The National Council of State Garden Clubs.

From Secretary Marilynn Howe comes word that Brian Duncan won the Engleheart Cup in London, with Tom Bloomer in second place. Tom Bloomer, known to all for his White Star, Silent Valley and others, was awarded the prestigious Peter Barr Cup by the RHS for his work with daffodils.

The January, 1985, issue of Garden Life, a Japanese magazine, contains a six-page article—complete with beautiful color photos—of the Springworld '84 convention. The article and photos are the work of our Dr. Shuichi Hirao. It's beautifully done, and should do much to spread the "yellow fever" in Japan.

Sometimes we are too quick to say a flower is misnamed. The same cultivar may look very different depending upon its stage of development. In the Cleveland show this year [1984] there were two collections of five cyclamineus both containing Snoopie 6 W-GPP. One had a very straight cup and the other was more goblet-shaped. Mine was the one that was straight and it was pointed out to me that maybe it was not correct since Snoopie should have a goblet-shaped cup. A few days later, I checked my clump and they were no longer straight. The one I had used in the show was not as mature as the one in the other collection. You may say, well, maybe you made a mistake, but I do not have very many pink 6s.....Foundling, Little Princess and who could confuse them with Snoopie?

There are many other cultivars that change as they mature not only in form, but in color, as the reverse bicolors and pink and white cupped flowers. Maybe we should give the exhibitor the benefit of the doubt

unless we are really, really sure.

Naomi Liggett

THE 1984-85 SEASON, AN INTERIM REPORT.

JAMES S. WELLS, Redbank, New Jersey Photos by the Author

On this last day of January, 1985, my daffodil season is about half over. All the early bulbocodiums are finished as are some of the jonquils, while the triandrus, later jonquils and Ajax types are just about to start. But the early group has produced a few items of interest which are worth recording, in both nomenclature and culture.

I have purchased four different lots of the so-called Nylon, but they have all proved to be slightly different. It has been clear that what is being grown under this name is a grex and not a clone; and with this in mind, I wrote to John Blanchard asking him if he might possibly have a bulb of the original form. In due time he replied that there is no true Nylon, and that it is indeed a grex. It seems that when these early crosses were made by his father, some of the outstanding bulbs were selected and named. These became Taffeta, Tiffany, and Tarlatan. Others remained which were growing as individuals, each under number. The whole lot was sent to Alec Gray for growing on and distribution; and when the group under numbers flowered, Mr. Gray decided that they were all so similar, and really very good, that he grouped them together and gave them the collective name of Nylon. This clearly can account for the minor, but clear, differences I see between bulbs from England, America, and Australia. So what do we do now? One of the best should no doubt be selected, given the name Nylon and propagated. The rest will just be planted out to take pot luck. With this information, I believe that the bulb I have been growing as a form of romieuxii is one of this Nylon group. A few of my friends who may have received this bulb from me under the name romieuxii (Avon form) sould now consider it one of the Nylon group. But it is such a good bulb that I may eventually select this as my form of Nylon, but this needs a little more time.

The second item of interest is that I find I have two distinct forms of *N. cantabricus petunioides*. I have established by correspondence with John Blanchard that one lot is the original form selected by his father, and in a number of finer points it is clearly the better of the two. This original form has thin prostrate leaves which are dark green. The flowers are of the typical petunia form with the corona spread quite flat to a width of 1¾ inches. The edges are frilled, the color a crisp clear white, and the texture excellent. The second form differs in only minor points yet is clearly a different bulb. The foliage is also thin and prostrate, but distinctly lighter green. There is a clear difference. The flower is of the same form, corona



N. cantabricus petunioides (original form)

spread flat with a wavy edge, but it is not quite so large, being about $1\frac{1}{2}$ inches across. It also does not seem to flower so heavily as the first type. Both flowers are beautiful, but the original is clearly better. John Blanchard suggests that the second may be a seedling raised from the original selfed.

Newly received bulbs of *N. b. graellsii* did not flower, but bulbs of the Award of Merit form of *N. romieuxii mesatlanticus* did. They are good, but not in any way different from the standard form which I have. These could be incorporated without difficulty which suggests that what I had was a good form to begin with. *N. b. pallidus* has bloomed and in the three bulbs received there were two forms. Both have pale yellow flowers—which might suggest that they might be forms of *citrinus*—but one had a shallow rounded cup as a corona, while the other two had deeper, more trumpet-shaped coronas typical of *nivalis*, but larger. These will be separated and grown on for some time to see if they do differ from other forms already in cultivation.

Some three years ago I "collected" a full pan of small bulbs of N. requienii (juncifolius) from the RHS Gardens at Wisley. Last year I had one flower which seemed to indicate that this was indeed the true bulb, but this year I had a fine pan in full bloom which was a pleasure to see. There is no doubt that what I have coincides with descriptions and illustrations in earlier RHS journals and therefore I believe I am now growing the true bulb. (I would be glad to exchange some with anyone who has something of interest to offer.) N. j. henriquesii is just coming into bloom and I appear to have two different stocks of this. The first and largest lot have all come



N. requienii (juncifolius)

from John Blanchard. When sorting these for planting last August I separated bulbs which were round or long. There appears to be no difference in these now, and I have to assume that the difference in bulb shape was due to conditions in the pans rather than anything else. But another pan which has developed from a bulb obtained from Brent Heath some years ago is not the same. This bulb is flowering at the same time; but the foliage and flower stems are more sturdy, slightly taller, and the flowers, while exactly similar in general form, are slightly larger. I really do not know where I am here and shall have to check back to both sources to compare, which will take another year or two.

Another item of interest. Some years ago John Blanchard gave me a few bulbs which he described as a wild hybrid between *N. triandrus* and *N. bulbocodium*. When it flowered it was a most attractive, very dwarf flower, with a pale cream and wide corona, rather pendent in habit. In leafing through Calvert's old book recently called *Daffodil Growing for Pleasure and Profit*, I came upon a picture, Number 167 in the back of the book, of a hybrid called Trimon. It is exactly the same as the wild hybrid. From the name one could suppose that the parents of Trimon might be *N. triandrus* and *N. b. monophyllus*, and indeed that is what the flowers look like. Trimon was registered in 1899 by A. W. Tait and received an Award of Merit from the RHS in February of that year. I do believe that the bulb I have is Trimon.

Last summer I collected bulbs of both Hawera and April Tears from as many sources as possible. These are now in full growth and in some cases budding. The idea was to determine if possible the exact form of each and the differences between the two. But I can see no light at the end of the tunnel, for I have strong vigorous bulbs with fine fat buds and short stubby forms with thinner foliage and no buds in each group. Clearly these are all mixed up and I wish I could talk to Phil Phillips who seemed to be so sure.

This year also I have had quite a fair amount of blooms on my first crosses, mostly bulbocodiums, and generally they are not worth considering. Most I fear will find their way to the garden where they will grow or die as they see fit. But one or two may have merit and I shall keep these for a year or two longer. One that is in flower now is a rather strange bulb being a cross between N. cantabricus petunioides and N. cyclamineus. Looking at it you would never know that it had either bulb as a parent, certainly there is not the slightest sign of the typical cyclamineus habit. The flower is not a sparkling white like petunioides but rather a warm white with richer tones. In shape the corona is long, similar to the normal bulbocodium but longer. The stem is quite short—not more than three inches—and it has been in flower now for over three weeks. This morning, with first flower open on N. cyclamineus, I have given it a second dose of this pollen. Two shots may give more of the cyclamineus form. Most bulbs throughout my collection seem to be budding well, with the notable exception of N. gaditanus, which you may recall flowered quite well last year. There may still be time, but it's very slow. Another that is not blooming is N. triandrus pallidulus Aurantiacus, but the pan looks very healthy so I have hopes for next year. I also have a fine lot of over forty seedlings of this bulb which I watch with an eagle eye.

Now to culture. During the season 1983-4 I still had quite a problem with basal rot. That year I had made up a new batch of compost which was sterilized with Vapam, and all the bulbs were lifted, cleaned, and repotted. The pots and pans were soaked in a chlorox solution and scrubbed clean, yet as the season developed I still had trouble. A substantial heap of the compost remained and this was stored in the open on a pad of black plastic and covered with the same to keep the compost moist, yet prevent heavy rain falling on it.

In July I decided that I would once again lift all my bulbs—excepting only the few in which I had duplicate pans—clean them, soak and clean the pans once more, and repot the bulbs in the compost that remained from the previous year. In the past I had also treated some bulbs which seemed very prone to disease with a shotgun mix of fungicides, mixed together as dry powders. The bulbs were either rolled and shaken in this, or if they appeared normal then just the base plate of the bulb was dipped as it was planted. I decided that this year all bulbs would be so treated. The formula of this mix in case you are interested is as follows, all parts by volume: 4 parts of 50% Benlate, 1 part of 30% Truban, 1 part of 30% Captan, and 1 part of 10% Phygon. The few pans that were not going to be repotted could not be treated in this way but the top soil was removed, down to the bulbs, new compost added, and the pans marked. I commenced repotting about the second week in August—slightly earlier than other years—and the compost was still slightly damp as it came out of the plastic storage. I

believe that this caused all the bulbs, particularly the bulbocodiums, to commence rooting immediately so that by the first of September many of them were strongly up. The net result of this early start has been to advance the blooming time of almost everything by about a month, although as we move through the season the gap is slowly closing. Thus I had many bulbocodiums in bloom at the beginning of October, and bulbs which had been in fine form last year at Christmas were at their best the latter part of November.

But the strangest development was the truly massive growth of leaves that has been produced on almost everything, quite out of character really, especially on the bulbocodiums. Pans which last year had a nice but modest crop of leaves through which the flower buds came without difficulty, this year have a thick matted pad of leaves on top of the pans. In many instances the delicate bulbocodium buds had difficulty in thrusting through. After much thought I came to the conclusion that the storage of the compost under black plastic outside through the summer was not a good idea. Certainly during the heat of summer temperatures must have built up under the plastic many times to a substantial level so that the final effect upon the compost was the same as if it had been steam sterilized. Certainly, the pans are weedless, but high temperature sterilization is known to release nitrogen, and that is what I think has happened. I have had the soil analyzed; and based upon the general level of fertility required for other greenhouse crops in pots such as chrysanthemums, it is not at all high. The pH is a little low at 5.3 but the total soluble salts is quite low at .70 ppm. Höwever, there is a fair amount of nitrate nitrogen (54ppm) which coupled with rather low readings of both phosphorus (20ppm) and potassium (56ppm) is too much. While the phosphorus is fair, the potassium is too low; and with these guidelines I plan a new and more carefully balanced mix for next year.

It remains to be seen what the early start into growth coupled with the heavy top growth of leaves will do the the bulbs, as they begin to ripen, and of course upon flowers for next year. It will be interesting to follow.

One positive point seems quite clear to date. The efforts made to clean everything and the individual dipping of each bulb in the fungicide mix have virtually eliminated basal rot—so far! I have had about six bulbs show signs of trouble but these have all been in the pans which were not repotted and only topped up. I have yet to find a diseased bulb in any that were repotted. However, it is early yet; and I have had a fine lot of *N. triandrus* before, and once blooming is over is the time to be most careful. Then I shall have to watch my watering with the greatest of care, keeping the bulbs very much on the dry side as they die down. In two weeks time, on February 17th, some members of the New Jersey Daffodil Society are coming to see what I have in bloom on that date. I hope I can persuade someone else in this area to get the "bug" for species pan culture, so that I can have someone to argue with. It's lonely on your own.

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